

University News

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Opinions expressed in the articles are those of the contributors and do not necessarily reflect the policies of the Association.

Editor :
SUTINDER SINGH

Our Hosts

Rabindra Bharati University A Profile

Rabindra Bharati University, Calcutta hosts the 71st annual meeting of the Association of Indian Universities on 26-27 November 1996.

The Beginning

A centenary of the birth of a poet in 1961 confronted the people of his state of birth with the question; what are centenaries for? Just the usual razzle-dazzle and fanfare to mark the occasion with impermanence? or, it is for something that would last and carry the memory ahead in a deeply meaningful way? They, led by Dr Bidhan Chandra Roy, the then Chief Minister of West Bengal, decided on the latter and proceeded to celebrate the centenary of birth of Rabindra Nath Tagore with the appropriateness it deserved, by establishing a new University in his name. That is the story of the beginning of Rabindra Bharati University, the third University to come into existence in the city of Calcutta. The ancestral house of the Tagores in Jorasanko at North Calcutta was requisitioned for the purpose, and it became the original location of the University, which was formally inaugurated by Pt. Jawaharlal Nehru, the then Prime Minister of India on Tagore's 101st birthday on 8 May, 1962.

The founding fathers also intended that it would be a University with a difference, unlike the conventional ones then existing. The Rabindra Bharati Act (West Bengal Act XXIX - 1961) offers this brief preamble: "Whereas it is expedient to perpetuate the memory of Rabindranath Tagore and, to that end, to establish, on the occasion of his one hundredth birth anniversary, a University at his residential house in Calcutta for the advancement of learning and culture, particularly in the branches of music, the fine arts, dance and drama..... It is, hereby, enacted in the twelfth year of the Republic of India by the Legislature of West Bengal.."

The University that was founded by Tagore himself in 1921, Visva Bharati, had of course a large component of cultural education in its programme, but it was somewhat far away from Calcutta, and the city, presumed to be a city of culture, lacked a place where systematic and rigorous training in performing and visual arts could be imparted and higher degrees could be offered in them. Rabindra Bharati University was realised in order to respond to this social need long felt in the city and areas surrounding it. This was, in fact, quite in consonance with Tagore's own ideals of total humanistic education. A University, he said, should be "the centre of Indian culture". "Culture" here is the key word, the various meanings of which were invoked when Tagore built up his own philosophy of education. He was aware of "the mutilation of life" that has taken place because of our neglect of the arts and therefore he proposed that in the University of his dreams.... "music and art must have their permanent seats of honour, and not merely a tolerant nod of recognition. The different systems of music and different schools of art, which lie scattered in the different ages and

provinces of India, and in the different strata of society, have to be brought together there and studied."

Rabindra Bharati was founded and developed along the same lines. But it also had features of its own which distinguish it from Visva Bharati. Its first Vice Chancellor, the late Hiranmoy Bandyopadhyay, pointed out its particular mission in this manner : "the two universities, Visva Bharati and Rabindra Bharati are tied in a common objective both being interested in Rabindranath, though in somewhat different ways. While the Visva Bharati is mainly interested in dissemination of knowledge and culture in the manner its founder wanted it to be disseminated, the sponsors of Rabindra Bharati intend to develop it on lines altogether different from the lines followed by its sister institution. Naturally, therefore there can be no clash of interest. Their roles shall be complementary, so that without working to the detriment of the interest of either, they can serve the cause dear to the heart of both....."

The University came into being with high hopes and some lofty predetermined ideals for it to translate into reality. How far it has been able to do it is for others to judge, but that it has come to occupy a central place in the cultural and educational landscape of the region is a fact nobody can ignore or deny.

A Brief Chronicle of Progress

To the original two faculties of Fine Arts and Humanities with which the University began its operation at the Jorasanko campus, a third faculty of Painting was added in 1973. All the faculties have subsequently undergone considerable restructuring as to their contents. The Fine Arts Faculty which originally had only three departments i.e. those of Dance, Drama and Music, has later added a Department of Rabindra Sangeet (Tagore Songs) in 1976 and then the department of music has also been bifurcated into two departments, those of Vocal and Instrumental Music in 1976. The Dance Department now headed by famous Kathhak exponent Smt. Bela Arnab has its major emphasis on classical Indian dances like Bharat Natyam, Kuchipudi, Kathhak, Kathakali, Odissi and Manipuri, while regional folk dances as well as modern creative dance and the innovative dance diction created by Rabindranath Tagore are also taught with earnestness. Vocal Music, Head of the Dept of which is

Professor Utpala Goswami (who also is the Dean of the Faculty of Fine Arts now), arranges its programme in all areas of North and South Indian Classical Music, Bengali Songs and Folk Songs. The Department of Rabindra Sangeet (Head of the Department Smt. Swapna Ghosal) has a specific and well-defined area of training. The Department of Instrumental Music (Head of the Deptt. Shri Deblprasad Chatterjee) offers courses and training in the Sitar, Violin, Flute and has also a stream which imparts higher training in Percussion instruments. Shri Asoke Mukhopadhyay heads the department of Drama which not only trains its students on the theoretical aspects of Theatre but also offers ample practice in acting, directing, set designing, script writing and makeup. Some of the productions of the department have earned considerable praise and popularity among the larger audience outside the University. Its recent production of Tagore's comedy *Chirakumar Sabha* (The Club of the Celebrates), which was sponsored by Paschimanga Natya Akademi of the Govt of West Bengal has become one of the most popular productions of the year earning the Best Director's Award from the Akademi. The UGC has approved a vocational course on Mass Communication and Videography to be conducted by the Department of Drama which has started functioning in the 1995-96 session, under the supervision of Professor Manoj Mitra, the famous playwright.

Professor Dharma Narayan Dasgupta, the celebrated Painter, supervises the Visual Arts Faculty as the Dean and is also the Head of the Painting Department. The Faculty has later been expanded in 1986 into five separate departments — those of Painting, Sculpture, Applied Art, Graphics and Printmaking and History of Art, headed respectively by Professor Dharma Narayan Dasgupta, Shri Manik Talukdar (Lecturer-in-Charge) and Shri Ajit Ganguly (Lecturer-in-Charge), Shri Harekrishna Bag and Dr. Sohini Dhar. In spite of its infrastructural constraints, this Faculty is carrying on its training programme with rigour and high dedication and it is probably the most successful faculty in terms of job opportunities of its students.

The Faculty of Arts (Humanities) which had a somewhat marginal role in the beginning, has had the scope of maximum expansion. A new campus, that of the Emerald Bower campus, was annexed to house this faculty alone in 1976. After about a decade, two professional courses of B.Ed. and BLIS

were added to the regular programmes in English, Bengali, Sanskrit, Political Science, Philosophy, History, and Economics. Undergraduate Honours courses were introduced in most of these subjects and M.Phil. programmes were also added. It is only in the Humanities faculty that all classes are also held in the Evening, in order to meet the pressing social demand for higher education. Many eminent scholars are and have been, teachers in this faculty whose works have been highly appreciated in India and abroad.

Dr. Kananbehari Goswami (Bengali), Shri Alok Bhowmik (Economics), Shri Subir Dutta (English), Dr. Tripti Chowdhury (History), Dr. Manjushri Chowdhury (Philosophy), Dr. Dilip Kumar Chatterjee (Political Science), Shri Subuddhi Charan Goswami (Sanskrit), Dr. Sanat Ghosh (B.Ed.) and Shri Pinaki Mukhopadhyay, all eminent scholars in their respective fields, are heading the departments as indicated. The headship in this University is rotational for two years, of course in the departments where the staff-structure is conducive to rotation.

Other Bodies of the University

What also marks the University off from other conventional institutions is the priceless possession of the Tagore House which has now been turned into a complex of museums & art-galleries consisting of a biographical museum of the poet. The poet was born, as he also died in the Jorasanko house and his memory has been kept alive in this museum, with his furniture, dresses, other personal effects, mementos and a good array of photographs as exhibits. Another museum on the 2nd floor emphasises the role of the family in the Renaissance of Bengal and India. There are three art galleries: one contains the European-style 19th and 20th century portraits of the Tagores including the members of the expanded family. Another has paintings done by Tagore himself. The third gallery displays representative samples from the works of the New Indian School, as well as those of the later Bengal School, the Tagore masters, Abanindranath and Gaganendranath, and Nandalal Bose, Jamini Roy, Hirachand Dugar, Indra Dugar, Mukul Dey, Ramendra Nath Chakrabarty, Ramkinkar Baij, Gopal Ghosh, for example.

The Tagore Museum has been, for the last few years, doing commendable work in spreading and

projecting the astounding creative aspects of Tagore outside India, in which the Indian Council for Cultural Relations has been an active sponsor. In 1991, it took an exhibition of Tagore's paintings and on Tagore's life to China, and two centres — Beijing and Shanghai, hosted these exhibitions. In 1992, it took a similar exhibition to Cairo, in connexion with the establishment of the Maulana Abul Kalam Azad Indo-Egyptian Cultural Centre there, and later the exhibition was also shown in Alexandria. Abu Dhabi in UAE was the next station in 1995.

The West Bengal State Akademi of Dance, Drama, Music and Visual Arts is another body of the University which carries on a vigorous programme for promoting arts and culture of the region, including folk culture, by giving awards (Akademi Awards) to eminent practitioners of various arts, organising exhibitions of art, sponsoring art-fairs, seminars and workshops. It had a big role in organising the Lalit Kala Art Fair in Calcutta in 1995. This is the earliest State Akademi in India and haloed names like Uday Shankar, Ahindra Chowdhury were once associated with it.

The University also has a very active centre for Adult and Continuing Education which has assisted in the literacy programmes, including their evaluation in various districts of West Bengal. It also offers many continuing education courses, including computer training in collaboration with the Computer Engineers of India. The courses of the Centre are quite popular and serve to strengthen the extra-mural role of the University.

The University Grants Commission granted two research centres to the University, during the VII Plan, both of which have distinguished themselves in the area of research, organisation of research-oriented lectures, seminars and workshops, as also in research publications. The *Centre for Tagore Studies* has Professor Debnath Bandyopadhyay as its Director, while Professor Samiran Chakrabarty is the Director of the *Centre for Vedic Studies*.

This University has a somewhat unusual programme of training disadvantaged children in various arts called the *Sanskriti Sanchar Prakalpa*. Dr. Somnath Sinha, Reader in Drama, directs this programme which caters to the artistic needs of the children from about 12 central Calcutta slums.

The National Service Scheme unit is quite active in the University. Its programmes for plantation, campus beautification, and various kinds of positive social actions have attracted wide public notice and respect.

There is also a *University Employment Information and Guidance Bureau* at Jorasanko which functions as a wing of the Directorate of Employment, Government of West Bengal and provides consultancy about opportunities in job and training and offers career guidance to students.

Comments Towards the End

Looking at its progress, which is commendable, one must not also ignore the fact that the University developed somewhat haltingly, and during its formative period, proper and adequate support for it was not always forthcoming. Otherwise, one is hard put to explain the existence of only 144 posts of full-time teachers in it, seven posts of which were added in 1993. A battery of about 250 part-timers bear the brunt of the teaching job. The students' strength veers between 5500 to 7000, and one can easily imagine the kind of pressure that creates in the academic environment. There are only four hostels which provide for about two hundred students, equally divided into males and females. The infra-structural facilities, are particularly lacking in the Visual Arts Faculty where there are Departments with merely two full-time members. The present Government of West Bengal and its Department of Higher Education, are, however quite favourably disposed towards this University and keen on helping it in its development at a fast pace. In spite of various early setbacks, the University has been put on an even keel now and hopes to further distinguish itself in the areas which are its forte. The teachers, students and the administration are all striving heroically towards a better future for the University.

The Non-Teaching Employees

The total number of non-teaching employees vis-a-vis the volume and nature of service to be rendered to a large and growing number of students and the total built-up and other areas to be properly maintained, has been very low as compared to corresponding number (on similar workload basis) in all other state-aided universities in West Bengal. Although a continuous process of rationalisation of

workload and re-allocation of staff among different Departments and Sections have been in operation the problem of staff-shortage has assumed serious proportions in almost all areas, particularly examinations, library, hostels, publications, student-services, caretaking, meeting cell etc.

The problem of daily-rated employees has been solved, as the Executive Council of the University has in a recent decision absorbed them in regular time scale, encouraged and aided by the State Government's sanction of some new posts and its humanitarian policy towards such workers everywhere.

Residence Facilities for Students and Staff

The University has four students' hostels at present, two for the boys and two for the girls. The total intake capacity in the two girls' hostels is only 98 and the two boys hostels can accommodate no more than 115 boarders. Since about 80% of the students are from a hinterland lying far and beyond the walls of the city and a large number is from such far-flung areas as North Eastern States (Tripura and Assam in particular), Andamans and Bangladesh, the demand for a seat in the hostels every year is acute indeed, which, however, can only be fragmentarily met by the University.

This constraint has resulted in a large number of commuting students. A proposed 50-seated girls' hostel at Salt Lake is however under way, which will marginally ease up the situation. The University has one Teachers' Hostel (8 flats) at Jorasanko, and one Employees' Quarters in rented house at Panihati which accommodates 30 families. The Vice-Chancellor's residence-cum-Guest House at the Emerald Bower Campus has been commissioned, but its full use will need some further planning.

Number of Officers, Supervisory-staff and other Non-teaching Employees

Sl. No.	Categories of Employees	Number
1.	Total Number of Officers (Including the Vice-Chancellor)	19
2.	Total Number of Ministerial and Technical Staff	139
3.	Total Number of all other categories of Non-Teaching Employees	204
4.	Total for 1,2, & 3	362

Other Facilities

Apart from ensuring a general membership of its students under the Student's Health Home, the University runs a skeletal health service for its students and employees on both of the campuses. The service has been expanded recently.

The University has two subsidised students' canteens, one on each of the campuses. Training in cricket, football, table tennis is provided by the University and its sports section organizes participation of teams in the above games in various regional and national competitions. An annual sports event is also held every winter where students, as well as teachers, take part with enthusiasm.

The University offers financial subsidies to students towards tuition-fees, educational tours, holding of re-unions, etc.

Organized Associations

The University has two Students Unions one each for the day and evening sections, which are doing excellent work in the areas of voicing the demands of the students, meeting them in an amicable manner, helping the authorities, publishing an-

nual magazines, holding 'fresher's welcome' for incoming and 'farewell' for outgoing students, arranging numerous seminars on contemporary topics and generally looking after the interests of the students with zeal and alertness.

Other than the elected Students' Unions, recognized democratic associations of teachers, officers, and non-teaching employees are constantly helping the administration with constructive suggestions and co-operative responses, which extend beyond their service-related demands. These associations are:

- A Rabindra-Bharati University Teachers Association
- B Officials' Concord
- C Administrative Staff Council
- D Rabindra-Bharati Karmi Sanstha
- E Rabindra-Bharati Vishwavidyalaya Karmi Sanstha

These apart, Rabindra-Bharati Praktan Chhatra Samiti (Alumni Association) has also been formed to help the university in various ways.



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The Education Scene in West Bengal

An Overview

The decade 1967-77 was marked by political upheavals in the State which severely affected the educational scene. The general environment was not exactly congenial for serious academic pursuit; students in schools, colleges and universities faced an uncertain prospect; the schedule of examinations was thrown totally out of gear; mass copying in examinations was a common feature. Most teachers and other staff — even of schools aided by the government — were without security of tenure; the payment of salaries was often irregular, and retirement benefits were inadequate and uncertain.

One outstanding development since 1977, when the Left Front assumed office, is the restoration of tranquillity in the academic arena. Turbulence in schools, colleges and universities has disappeared, examinations are held more or less according to schedule, the practice of unfair means in examinations has been restrained, teachers at all levels have come to enjoy total security of tenure, the payment of salaries and retirement benefits has been regularised.

Financial Outlay

There has been phenomenal increase in the financial outlay on education since 1977. The non-plan outlay on education registered a ten-fold increase between 1976-77 and 1991-92 in absolute terms; the real rate of increase should be more than 300 per cent. The non-plan expenditure on education as a proportion of the total State budget moved up from 12.89 per cent in 1976-77 to 12.97 per cent in 1981-82 to 17.78 per cent in 1986-87, and 21.10 per cent in 1992-93.

Much of this increase however represents an aspect of 'catching up'. The level of educational outlay in recent years in West Bengal does not seem to be out of alignment with outlays in other major States of India; if anything, in some spheres the outlays lag behind outlays elsewhere. In higher education, the state's non-Plan expenditure once more fell somewhat short the national norm; per capita actual outlay was around Rs. 14 as against the norm of Rs. 17.

New Institutions

A corollary of the remarkable increase in the financial outlay of the State government on education is the increase in the number of educational institutions as also more intensive and extensive use of the physical facilities of institutions that already existed. Between 1976-77 and 1991-92, the number of primary schools has increased by 10,080,

of secondary schools by 569, of higher secondary schools by 879, and of colleges by 87. A new university, the Vidyasagar University located at Midnapore, was also established during this period.

Enrolment

Over these years the number of students at the primary level increased by 4,125,901 (81 per cent); at the secondary level, by 4,416,122 (17 per cent); and at the higher secondary level, by 225,382 (373 per cent). The enrolment in colleges went up by roughly 87,000, an increase of 50 per cent.

Literacy

According to census estimates, the rate of literacy moved up in the State from 48.6 per cent in 1981 to 57.7 per cent in 1991. The relative ranking of West Bengal among 14 major States in the country did not however change over the decade. West Bengal was the fifth most literate State in 1981 among these major States; it remained so in 1991.

Incentives

Education upto class X, and then upto Class XII, was made free with effect from January 1980 and January 1981 respectively. The supply of free textbooks, particularly to students of primary schools, is another fact worth mentioning. The free distribution includes the supply of all text books for all classes up to Class V and the text book on mathematics for Class VI.

Two additional incentives were announced to help the cause of universalisation of primary education: free mid-day meals and free school dress for a considerable number of girls attending primary schools. According to official estimates, close to 33 lakh students benefited from the scheme of mid-day 'tiffin' for all school children in 1986, while 100 per cent of girl students belonging to Scheduled Caste and Scheduled Tribe communities as well as 40 per cent of other girl students were supplied free school dresses in that year. This programme has however, of late, been adversely affected because of severe resource constraints.

Mother Tongue as the Medium of Instruction

One of the most significant decisions in the post-1977 period is of course the abolition of teaching English as a second language in Classes I to V and the simultaneous introduction of mother tongue as the only language to be taught at the primary level. It is however necessary to mention that those twin measures had already been adopted nearly everywhere else in the country.

Higher Education

The 10+2 system was introduced in West Bengal in 1976, replacing the previous eleven-year school system, on the recommendations of the National Education Commission, 1964-66 (the Kothari Commission), and has continued without change since then. Higher Secondary education is conducted in three different types of institutions, colleges, schools, and a few 'independent' higher secondary institutions.

To cater to the needs of the increased inflow of students resulting from the expansion of the school education in the state, seventy three general degree colleges, two teachers' training colleges and two physical education colleges were established. A new university commemorating the name of the great educator-humanist, Ishwar Chandra Vidyasagar, was set up in the district of Midnapore which offers a number of new courses with a rural bias. All the state universities have been provided with liberal financial assistance to set up new departments. A new department to study Astrophysics has recently been set up at Calcutta University and a Folklore Department has started functioning at Kalyani University. The state government helped Jadavpur University to establish a second campus for engineering courses at Salt Lake. The Department of Science & Technology has sponsored and financed a large number of research schemes in different universities of West Bengal. In spite of financial crunch the state government spared no effort to provide grants for research and libraries of universities of West Bengal.

The Government College of Art and Craft which previously awarded diploma was turned into a degree college. The Bengal Engineering College, Howrah, a premier technological institution of the country, has been transformed into a Deemed University, raising the total number of universities and university level institutions in West Bengal to 13. The government is thinking to set up another deemed university by upgrading the status of Sanskrit College which played a pivotal role in Bengal Renaissance. In Presidency College, departments of Physics and Zoology have been upgraded into Postgraduate departments and a few other departments are poised for upgradation within a short period. Two Advanced Centres of Study, one in Economics and the other in Geology, are being revitalised by providing them with adequate grants. Technological colleges are being strengthened and the College of Textile Technology, Serampore will soon start the M.Tech. Course. Introduction of the Master of Visual Arts Course at the Government Colleges of Art & Crafts is under active consideration of the government. In the College of Physical

Education, Banipur, M.P. Ed. Course has been opened recently.

Distance Education Centres have been opened at Burdwan and Vidyasagar Universities and the Indira Gandhi National Open University has been given facilities to open its study centres in a large number of colleges in Calcutta and in the districts.

Three centres have been started by colleges to provide training to the intending candidates for various competitive examinations. About twenty four centres are giving assistance to such examinees especially to those belonging to backward sections of the society.

In addition to colleges and university, the Dept. of Higher Education set up Netaji Institute of Asian Studies in 1981 as premier research centre for undertaking interdisciplinary research to examine the current political, sociological and ecological developments in the South East Asian region. More than twenty five projects have been undertaken by the institute besides the publication of a quarterly journal and a few important monographs.

What is described as 'democratisation' of educational administration is generally regarded as a major development in the State in the period since 1977. Statutes have been either amended or passed afresh so that

- (a) the universities can now be stated to be autonomous in most senses of the term;
- (b) elected members on university bodies and the governing bodies of non-government colleges constitute the majority, and
- (c) the managing committees in the secondary and higher secondary schools have by and large come to enjoy the same status as that of governing bodies of non-government colleges.

The state government has taken two specific steps to protect the interest of teachers as well as of members of the non-teaching staff in colleges. The first is the enactment of a legislation which makes it the legal responsibility of the government to effect direct payment of salaries, etc, to the teaching and the non-teaching staff of colleges. A further piece of legislation guarantees the security of their service. These legislations taken together have ensured a near foolproof protection of services and salaries for teachers and other staff that was inconceivable in the pre-1977 era.

As a follow-up of the recommendations of the Education Commission 1992 (Mittra Commission), restructuring of syllabi, reforming the examination system and improving the quality of education have been given priority in the agenda for higher education in the years to come. Modern courses like com-

puter science, women's studies, tea technology, fisheries and study of theatre and films have been instituted in different colleges and universities. Steps have been taken for introduction of vocational subjects in higher education in the state. A large number of colleges are collaborating with universities and autonomous institutes to provide computer study facilities. Six new colleges, one each at Baravisha, Coochbehar, Panchthupi, Khairasol, Pratapdighi and Baghajatin are under active consideration of the government. A number of new colleges have been set up in the hill areas of the State and the older institutions are being strengthened and diversified.

A Council of Higher Education has been set up to give a direction and plan for future course of action in the field of higher education in the State.

West Bengal is one of the few states where capitation fees and gross commercialisation are absent in higher education.

Quality has, however, not kept pace with quantity. The problem that attracts immediate attention is the unplanned growth of colleges. Barring a few old and large ones, most colleges are known to be lacking in library and laboratory facilities, playgrounds, a sufficient number of class rooms, etc. A much bigger problem is posed by the absence of comprehensive curriculum planning. The point of view that such curriculum planning is inseparable from the teaching and evaluation system in the higher levels of education should receive a respectful hearing.

The greatest contemporary social tragedy is that a huge number of students in the State fill up the undergraduate colleges, particularly pass classes, simply because they have nothing else to do: they prefer to elongate the phase of supposed education because of the grim prospects awaiting them in the labour market.

The need for introducing a well-planned income or employment-oriented scheme of vocational and technical education is therefore crucial. Apart from industrial training of the more conventional kind, there should be vocational training for a host of occupations not strictly industrial in nature, but which are likely to absorb a major section of new entrants to the labour force every year. A significant proportion of those who successfully complete the courses in the polytechnics and industrial training institutes need to have a fair acquaintance with the techniques of cost analysis, marketing, packaging, customer and consumer service, labour relations, material management and investment analysis. The chambers of industry and commerce should be persuaded to provide facilities for practical training.

There should be a greater involvement of banks and other financial institutions in the work and study programmes of the technical and vocational institutes in the State.

One problem common to all levels of education is the proper recruitment of teachers. The existing arrangements have come under severe criticism from different quarters. One reason for the felt dissatisfaction is the lack of uniformity in selection procedures. The College Service Commission may prepare a panel of selected candidates for appointment in different subjects and areas of specialization and published it; the panel will also give the order of merit of the candidates so selected. Colleges will make their own appointment from within this list.

A system of assessment of teachers may be introduced. Three types of assessment may be initially considered. First, a regular self-assessment; second, an assessment by the college principal; and third, an assessment of the teacher's performance by the students on a number of specific points.

An all-pervading problem affecting each stage of education, which continues to be the major concern of the State government, is the paucity of financial resources. As recommended by the Mitra Commission, the concept of 'Cluster Colleges' be given a fair trial both in respect of teaching and research. No objection should lie in the acceptance of private grants by educational institutions as long as these are without strings and not subject to conditionalities. The State government may consider approaching the Centre so that grants for educational purposes from *bonafide* sources are treated at par with grants to charitable trusts, etc for relief from income tax. Educational institutions in West Bengal should seek accommodation from the public financial agencies for meeting the cost of school and college buildings, laboratories, libraries, etc.

What is essential is a total transformation of social ethos and in the general attitude of the community toward issues which concern education. To usher in this transformation, the first task is to create an understanding among, and mobilize support from, different strata of people. The mobilization has to cover teachers, students, professional promoters, guardians and authorities involved at different levels, and finally, the entire spectrum of the political leadership and mass organizations.

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Information Technology and Higher Education

The Indian Context

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The rapid developments that have taken place in recent years, in the field of information technology, have paved the way for revolutionary changes in higher education, in terms of both methodologies and concepts. The new technologies have basically provided access to a vast volume of information, helped in handling this information more competently and have consequently assisted in improving both quality and productivity. Evidently if the breakthroughs in information technology are to be fully taken advantage of then there have to be major changes in our policies regarding teaching, research and educational administration. A corollary is that there has to be a revamping of the infrastructure and appropriate changes in procedures and methodologies.

Emerging Information Technologies

Information is a resource which, like unmined mineral wealth, has no value until extracted, processed and utilised. At the same time the amount of information being generated today is astronomical and the problems relating to its storage, dissemination and analysis are testing human ingenuity. Fortunately new technologies are being developed at an extraordinary rate and this ensures an exciting contest between generation and utilisation of information. In India personal computers, facsimile (FAX) and electronic mail (E Mail) have become common, educational television and multimedia have been introduced, computerisation of administration and libraries is underway, interactive TV and networking through computer-based electronic message systems (CBEMS) are a reality, and the emergence of a multimedia information superhighway (MISH) imminent. It will, therefore, be of interest to briefly review some of these developments.

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Information Highways

Conventionally, the transfer of information has been through the media of letters, books, telephone, radio, video, television and computers. These have now been integrated at the electronic frontier to give information highways (rather superhighways) that facilitate rapid transfer of information on a global scale. Basically this involves the linking of (millions of) computers through telephone lines via a device called modem. Technologically it requires a harmonious intermeshing of optic fibres, telecommunication cables and satellites. Today, this linkage allows the transfer of not only data but also sound and visuals.

The information superhighways have revolutionised life in the United States and many western countries, bringing workplace to the home, and making 'virtual office' and 'virtual classroom' possible. This has been achieved because of the availability of high-class technology. The question is whether it is possible to duplicate this in India. In a cover-story in its July, 1994 number *Dataquest* questions "Outdated telecom facilities, high cost of connection, a waiting list that never ends, low technological awareness, bureaucratic interference... Can any kind of revolution ever take place in India?", and adds "A sane person would think twice before betting that India would be a part of the information superhighway. But, five years down the chances are the country would have networks similar to the best of the world". It optimistically concludes "The info highway will come, and so quietly that most Indians will not realise the momentous changes taking place".

Multimedia

A multimedia system is one which makes an integrated use of the three senses — visual, audio and tangible. Multimedia, thus, involves the interactive use of images and animation (visual), speech and music (audio), and text and data (tangible) on the same screen. Interactive multimedia is computer-centred and with rapid developments in software capabilities, has immense potentialities in professional education, especially technical and management education. Computer Aided Learning (CAL) using multimedia is likely to greatly alter learning patterns.

Digital Libraries

Libraries, which upto very recent times were essentially stacking print material (with some microfilms), have now begun to acquire electronic media like CD ROMs and Multimedia packages. In the coming years the quantity of electronic material is likely to increase substantially and it is clear that libraries will have to prepare themselves for conversion to electronic libraries, also commonly referred to as digital libraries. It is a heterogeneous system in which information is available in hard copy on magnetic tapes and discs, CD ROMs and videodiscs, and also from online systems. Thus the main characteristics are that the storage of information is in digital form, communication networks are used to access and obtain information, and copying is either by downloading or online/offline printing from a master file. Such libraries are capable of providing very diversified information as they make use of information highways and databases. More importantly they facilitate informal, independent and individual learning. However, it is anticipated that the electronic libraries will evolve only in an incremental fashion out of the existing library system, and that at least for the next few decades we will have to operate in a dual — paper-based and electronic — environment (Metz, 1995).

Information Sources and Services

Globally, the most important superhighway is Internet. Established in 1969, in the United States, as a military communications system, it today has over 40 million members spread over about 130 countries. It allows the individual to access 20,000 networks and thus link up with organisations, academic institutions and research groups the world over. Indian computers can hook-up with Internet through Ernet of the Department of Electronics (DOE) or through NICNET of the National Informatics Centre (NIC) of the Planning Commission.

The World Wide Web, also referred to as WWW or Web is a multimedia surface for Internet which links up resource bases throughout the world. It allows browsing information through computers, by clicking interlinks (icons or words) and thereby calling on display, on the computer screen, texts, video, graphics and also sound. The WWW is an inexhaustible source of information and has become an essential tool for all research workers.

Other international networks include the United Nations Information System for Science and Technology (UNISIST), International Information System in Agricultural Sciences and Technology

(AGRIS), Population Information Network (POPIN) and the Geographic Information System (GIS).

A number of information sources and networks have been established in India. Some of these, which are relevant to the universities, are briefly described below.

NICNET is a satellite based government informatics network set up by the National Informatics Centre in 1977. Its objective is to connect various ministries/departments of the central government with those of the states, and also associated semi-government and autonomous organisations and act as a governmental information system. This intracity and intercity computer network presently links twenty cities of the country, with another seventy cities to be added soon. Ultimately the capital of the country will be linked with the state capitals and district headquarters, and even *taluka* centres.

The Natural Resources Data Management System (NRDMS) of the Department of Science and Technology provides computer-oriented resources data management systems at the district level. It has files on different types of natural resources (forest, land, minerals, environment etc), socio-economic characteristics (demography, agriculture, industry, infrastructure etc), and remote sensing data (aerial photographs and satellite imageries).

The National Information System for Science and Technology (NISSAT) is an information system that links sectoral information centres for a variety of products including leather technology, food technology, machine tools, drugs and pharmaceuticals, textiles, chemicals and computer discs and provides factual and numeric information on product, discipline and mission.

An Education and Research Network (ERNET) set up by the Department of Electronics, links computer services at the five Indian Institutes of Technology (Delhi, Kanpur, Kharagpur, Madras and Bombay), four Indian Institutes of Management (Calcutta, Ahmedabad, Lucknow and Bangalore), the Indian Institute of Science, Bangalore, the National Centre for Software Technology, Bombay, and select universities.

Other important Indian information systems include the Defence Science Information Network (DESINET), Agricultural Field Experiment Information System (IASRI), National Management Information System for Science and Technology Sector (NMIS), Water and Power Information System (WAPIS) and Integrated Inventory Information System (IIS).

During the 1990s a number of library networks

have been developed in India linking different libraries in the metropolitan cities. The first to be developed were the Calcutta Library Network (CALIBNET) and the Delhi Library Network (DELNET). These were followed by networks for Bombay (BONET), Madras (MALIBNET), Ahmedabad (ADINET), Pune (PUNENET), Bangalore (BALNET) and Mysore (MYLIBNET). These networks are in the process of creating databases of their holdings and in automating the library activities (Murthy, 1996).

Information and Library Network (INFLIBNET) is an ambitious programme launched by the University Grants Commission in April, 1991. A venture for the pooling, sharing and optimisation of library resources it aims at providing a channel for sharing of resources by the academics in the universities. INFLIBNET will include participants from colleges, universities, R & D institutes, information centres and other centres of higher education (Kumar and Arora, 1996). Fifty four universities have been identified for funding for automation during 1993-95, and 15 others have been identified for funding during 1996-97. The INFLIBNET programme has provision for funding for computerisation and databases, and for training of staff.

Learning in the Information Era

Throughout the world higher education is slowly but surely undergoing a paradigm shift from an instruction-centred college/university model to a learner-centred, integrated network model based on access to learning resources and student initiative (ICDE, 1996). The rate of change is conditioned primarily by socio-economic factors and by the availability of technologies. The new instructional technologies have increased academic productivity, enhanced traditional teaching, and have brought about changes in pedagogy and curriculum content (Green and Gilbert, 1995). One can say that technology, in general, and information technology, in particular, has radically altered the procedures of formal education and opened up new vistas in non-formal and distance education.

The new technologies have proved to be a boon to the individual teacher and has greatly increased their productivity. Compared to the teachers of yesteryears they receive little secretarial assistance, and are yet able to prepare their own teaching materials, research proposals, manuscripts of research papers and other documents. And this is being achieved at lesser operational cost.

In the case of formal face-to-face education the new technologies provide effective tools that com-

plement conventional teaching practices. Audio-visual aids have made classroom learning more explicit and perhaps more interesting. Multimedia packages have greatly facilitated and encouraged individualised learning. Not surprisingly, Computer Aided Learning (CAL) is fast becoming an integral part of formal professional education, especially in the areas of technology and management.

Distance education has been a major beneficiary of developments in information technology. Early innovations like audio and video-cassettes facilitated the dissemination of information and the delivery of guidance and instructions. A direct result was the development of the *Telecourse Model* of distance education in the United States. The subsequent introduction of the interactive video communication systems (two-way telephone, interactive television, teleconferencing and now online discussions on Internet) facilitated distance learning for groups at off-campus locations and gave rise to the *Distributed Classroom Model* (Miller, 1995). Today, workplace learning is encouraged by industries and business houses, and there are commercial providers of instructional materials. Universities will have to take note of the fact that they are no longer the sole providers of education, and as pointed out in the ICDE Project Report (1996), "*Colleges and universities, in fact, will likely no longer be the principal producers of new knowledge nor chief sources of access to information*".

An important fallout of the recent explosion in information technology is that group learning is being replaced by individualised learning. In fact with the development of information storage devices like CD-ROM, the availability of Multi Media, and the incoming of Internet individualised learning has the potentiality of becoming the most popular learning process. Moreover, the advent of virtual classroom and video desktops (two-way audio and video) promises interesting possibilities, including the remerger of the formal and non-formal streams.

Information technology has helped in changing the content of programmes and curricula, basically by making new information easily accessible, and by making rigorous analysis of data possible. The regular updating of course content is now possible for one need not wait for the publication of books incorporating the latest information. Likewise easy computation facilities allow for a mathematical treatment of hypotheses. In science and technology programmes it has been possible to introduce new ideas like computer-based simulations. Regular enrichment of curricula is now easily undertaken.

Research in the Information Era

The networking of research bases and the cre-

ation of information highways has radically changed the methodologies of research. Today, a research worker has access to almost unlimited information and is exposed to a much wider spectrum of ideas and concepts. It is possible for research workers with common interests to not only share the latest information but also have online discussions via the computer. This has affected the thinking and approach of research workers. Handling and interpretation of information is now much more rigorous and subject to statistical and textual analysis. With research contributions getting much greater exposure an improvement in quality can be foreseen. Moreover, research workers will be discouraged from publishing on matters of local interest and publications that attempt to tackle problems having wider, regional or global implications will attract greater attention.

The Future Scenario

The recent developments in computer technology and telecommunications have ushered in a revolution that promises to affect human life more profoundly than any other discovery of the past. In his examination of the 'cyber future' Cornish (1996) lists 92 ways in which our lives will change by 2025. The possibilities he foresees in the field of education include the following :

1. The education experience will be dramatically enhanced by multi-media, computer simulation, virtual reality and other teaching tools.
2. There will be a boom in packaged educational products.
3. The tremendous increase in knowledge available in libraries and databases will bring to the forefront the critical question as to what a student really needs to learn.
4. An incredible amount of information will be available to students writing term papers.
5. Global universities will emerge bringing together students and faculty from many nations via computer networks, satellite television and other advances.
6. Infotech alone will not ensure good education. Teachers will continue to be needed.
7. Teachers will resist infotech in education when it threatens their jobs and privileges.
8. Infotech will allow students to take courses at their own pace and get credit whenever they have mastered the material.

As far as India is concerned many of these possibilities are already emerging. Distance education, which allows students to learn at their own pace,

has become an established mode of education. Packaged educational programmes are available. Multi-media and computer simulation are being employed in professional programmes. Research workers in atleast some universities have access to internet. And universities have started to think internationally as regards their course contents. However, the benefits of the new technologies are available to a very limited extent, and that too to the more privileged universities. And even in these privileged universities the facilities available are nowhere near what is offered by their western counterparts. At Harvard, for example, teachers and students (even Freshmen) of the faculty of Arts and Sciences, and of the Professional Schools, are on-line with easy access to the network. Activity on the Net is heavy at almost all times with a slowdown occurring only between 3.00 a.m. and 6.00 a.m. (Rudenstine, 1996). The danger Indian higher education faces is that of becoming largely irrelevant unless adequate financial resources are immediately made available for introduction of the new technologies. The amount required will be staggeringly large, but must be found for all our universities. Harvard plans to spend in the next five years \$50 million on new administrative data systems and \$75 million to \$100 million on academic-related information technology. Will we be able to provide a similar amount for all our universities put together?

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SEARCH FOR LEARNING

The Treasure Within

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The Context

The Education Commission (1964-66), popularly known as Kothari Commission gave a landmark report on educational policies for the post independence period. Identifying social and national integration as one of the major problems of national development, the commission elaborated it in the context of education :

Even more important is the role of education in achieving social and national integration. Indian society is hierarchical, stratified and deficient in vertical mobility. The social distance between different classes, particularly between the rich and the poor, the educated and the uneducated, is large and is tending to widen.

There have been several reports on educational policies subsequent to the commission's report. However a large number of educationists still find the perspective incorporated in the Education Commission's report valid even at this stage. While education systems must be firmly rooted in the country's own culture and needs, these can no longer remain oblivious to global trends. It was realised decades earlier and was, accordingly, highlighted in this report. Thirty years after this report, these ideas and issues are echoed in global context in the Jacques Delors report to UNESCO on Education for the 21st century.

An International Commission on the development of education brought out a report in 1972 entitled *Learning to be*. This Commission was headed by former French prime minister, Edgar Faure. The beginning of 70s saw a climate of euphoria and optimism generated by economic and social achievements. The process of decolonization was more or less complete and everyone was talking of the possibilities of peaceful coexistence. Faith in international cooperation including aid and assistance was increasing. This report was based on data from the

previous decades. In late 60s a sense of unrest did make its presence felt through agitation in several countries. However the climate was full of hope and a possible bright future. This report emphasised life long education and is still remembered for focusing on "the Learning Society". Life long education became a key component of education policies in most of the developing countries and several strategies suitable to local situations were evolved and tried out. Obviously, the Faure Commission did not regard life long education as a process of permanent schooling, adult education or continuous vocational training. It was seen as a 'principle on which overall organisation of a system and hence the elaboration of each of its part are based'. It was a need of each individual. If achieved, the consequence would be a learning society. This report explicitly suggested "a new organisation of education systems designed to do away with antiquated or un-justified barriers and to rid traditional structures of their excessively formal nature" (Asher Deleon, *Courier*, 1995). The expectation was that backwardness, dysfunctions and shortcomings of education in relation to human needs can gradually be overcome. "Thousands of experiments in recent decades have been carried out along these lines. At the same time, a battle has to be waged against conservatism at national level, inadequate commitment of developed countries and international organisations, external interference in domestic affairs of many states, and the rigidity of administrative, productive and other structures, including the teaching profession" (Asher Deleon, *Courier*, 1995).

So much has changed on the educational front in the last two decades following the Faure Report. The March 1990 World Conference on Education For All (WCEFA) held in Jomtien, Thailand, put forward the global resolve of 'achieving education for all by the year 2000'. It had a positive impact not only on education policies in developing countries but also on the implementation strategies. Focus shifted to quality and learners' achievements in the formal schools and implementation of alternative schooling to children who could not join the main-

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stream of basic education and those who had dropped out of the schools without completing any substantial period of learning. Subsequent to Jomtien, there have been several other international deliberations on the highest level to ensure achievement of the targets specified. The E-9 Summit held in Delhi in December 1993 focused on specific issues of the 9 most populous countries which are still struggling with a large number of illiterates. During this period the strategies of adult literacy and non formal schooling have gained credence and acceptability which is a very encouraging trend.

The Initiative

The last decade of the 20th Century shall be remembered for the explosion in communication technologies which have far reaching relevance to education, its expansion and its quality. It has serious implications for the very nature of teaching and learning process at each stage of education. The roles of school, community and the teacher are changing at a very fast pace. The responsibility and accountability of the governments are under severe stresses and strains. The telephone, television and computer are becoming 'in-things' in the classrooms. There is certainly an urgent need to have a fresh assessment of educational policies in the context of the unexpected though welcome developments in communication technologies. Education has to respond to the realities of globalisation on the one hand and the emerging identifications with local and ethnic bonds on the other. This was and is being realised the world over. To respond to these changes and challenges, UNESCO appointed an independent International Commission on Education for the 21st Century, chaired by Jacques Delors. The membership of the Commission was drawn from the major world regions. The report of the Commission entitled *Learning : The Treasure Within* shall unfold major issues for discussions and deliberations in the next decade and would become an effective means for understanding the issues, the expectations and the possibilities for the future. Delors has indicated in the beginning how the title of the report was arrived at, based upon La Fontaine's fables, *the Ploughman and his Children* :

Be sure (the ploughman said), not to sell the inheritance

Our forebears left to us:

A treasure lies concealed therein.

Readapting slightly the words of the poet, who

was lauding the virtues of hard work, and referring instead to education — that is, everything that humanity has learned about itself — we could have him say :

But the old man was wise

To show them before he died

That learning is the treasure

The report begins with a signed chapter by Delors entitled 'Education: the Necessary Utopia'. It fits so well in the situation in countries like India where the goal enshrined in the Constitution — providing free and compulsory education to all children till they attain 14 years of age — remains elusive till this date.

This report has identified seven tensions, four pillars, three current crises and four crucial issues for education. After the signed chapter by Delors, it has three sections and nine chapters followed by an epilogue containing eleven contributions by the individual members of the Commission. With appendices, it has 266 pages of most interesting, revealing, rewarding and refreshing readings on all aspects of education in terms of the legacy, growth, developments and relationships to other sectors leading to future visions and perspectives.

The Tensions

Peace, freedom and social justice are the perennial goals before humanity. Efforts to achieve these face many challenges. Education is 'an indisposable asset' which helps in all such efforts. The Commission reiterates the belief that 'education has a fundamental role to play in personal and social development'. It also takes a pragmatic view that 'education does not provide a miracle cure or a magic formula opening the door to a whole new world in which all ideals will be attained'. However education is 'one of the principal means available to foster a deeper and more harmonious form of human development and thereby to reduce poverty, exclusion, ignorance, oppression and war'. This is a very comprehensive statement which precisely identifies the goals before the education systems, particularly the decision makers and the implementors of these decisions. The fruits of education are for everyone to see and observe in terms of quality of life and the economic gains. Many countries have come out of the shadows of under development and have achieved reasonable standards of living. However, many more have not been so lucky and fortunate. Several trends have sharpened the attachments to ethnicity

and other means of group identification like religion, language, etc. Economic development alone does not mean societal development. Education also needs to provide peace, patience and perseverance. Unfortunately, there are so many tensions around. These have been identified as central to the problems of the 21st Century by the Delors Commission. Classifying these in seven categories, Delors begins with the tension between the global and the local, indicating that people would become world citizens only gradually. Major part of their active life would be devoted to their nation and the local community. None can take a risk of forgetting unique characters of the individual human beings. They themselves have a right to choose their own future and achieve their full potential. The contemporary development must be watched carefully to avoid any danger to their own culture. The tension between tradition and modernity has been perpetual but the magnitude is far more enormous at this stage. The spotlight which is presently on immediate problems must be focused on the long term considerations as well. Education must precisely identify its role in this context.

While there is a need for competition, the issue of equality of opportunity has become more pragmatic in developing countries. Those who have remained excluded and alienated for ages now not only want equality of opportunity but demand a partnership in power and possessions. Such issues can no longer be ignored by those accustomed to authority and decision making.

The extraordinary expansion of knowledge has resulted into several anomalies in education. One of these is that of the curriculum load on young children. The capacity of human beings to absorb this expansion of knowledge and information would obviously remain limited. In this process, the need to provide basic education that prepares pupils to improve their lives through knowledge, experiment and development of personal cultures must remain in forefront. The last tension identified is between the spiritual and material. The humanistic, ethical and spiritual values add much to the higher quality of life and, in a way, the human survival depends upon them. Each country, for varying reasons, finds it essential to place renewed emphasis on the moral and cultural dimensions of education, enabling each person to grasp the individuality of the other person' which immediately requires self-understanding whose milestones have been identified as knowl-

edge, meditation and the practice of self-criticism. Only such persons would appreciate the logic and rationality of the changes and function effectively in a family, as a citizen or as a productive member of society. Simultaneously, the Commission 'in no way undervalues the central role of brainpower and innovators' and 'is aware of the contribution that education must make to economic and social development'.

The Pillars of Education

'Learning to know' is the first pillar of education identified by the Commission. It emphasises the necessity of a broad general awareness resulting out of knowledge. It goes on to focus on the need to acquire specific understanding to work on smaller areas acquiring adequate proficiency. The learners and the citizens need not be overawed or overwhelmed by the flow of information. In a world full of complexity and turmoils, people need to be aware of these and possess the skills to find their own way in it and out of it. Every individual needs to acquire self learning and self orienting skills to utilise every learning opportunity throughout life. It may be towards broadening his knowledge, skills, attitudes and capacity to adjust in complex, changing and inter-dependent world. In the search for life long education, every person needs to continuously renew the general background and enhance indepth awareness. 'Learning to know' presupposes 'learning to learn'. The television has brought forth the need to develop the powers of concentration, memory and thought. Needless to say that the domination of television, satellites, and computers would soon be universal. Consequently these three would become global concerns of educational processes.

Closely linked to 'learning to know' is the second pillar of education 'learning to do'. The two obviously are interlinked and inter-dependent. Unfortunately, in developing countries education has not necessarily taken note of the close relationship of both. Learning to do is more closely associated to vocational training and its utility in life stands assured. These aspects need to be examined in specific context of each country. The approaches of industrialised economies and those of the countries having more manpower shall obviously be very different. The current emphasis on competence as compared to skill in the past would probably respond to the issues raised. Requiring the workers in different fields of activities to function as the agents of change

would require infusion of personal competencies and life skills. Abilities to communicate appropriately, working in groups and conflict resolution shall become increasingly important. Education shall have to focus on these aspects as in the emerging high-tech organisation, adjustments issues could acquire serious proportions. Consequently, new types of behavioural skills would require much greater emphasis than even the intellectual skills. Towards this, most of the developing countries are keen to ensure acquisition of a scientific culture that would provide access to learning of technology as the way for the future. Capacities and capabilities for innovations and creativity shall have to be nurtured within the local contexts. The major issue is to prepare people who would contribute effectively in creating the future for mankind.

The present trends of fissiparous tendencies, violence, disintegration, ethnic rivalries and others focus on the third pillar of education — 'learning to live together' and also 'learning to live with others'. Conflicts have always been there amongst individuals, groups, societies and countries. However, new trends are emerging at the present juncture of history. How and to what extent education could contribute in these critical areas needs to be analysed. The report raises a very broad question — 'is it possible to devise a form of education which might make it possible to avoid conflicts or resolve them peacefully by developing a respect for other people, their cultures and their spiritual values'? The Commission endorses teaching of non-violence in schools as laudable. At the same time it acknowledges that this alone is not sufficient for combating the prejudices that lead to conflict. Other avenues also have to be explored.

The technological development and communication explosion have opened new vistas for generating awareness about other communities, countries, cultures, religions, practices and social patterns. Could this be gainfully utilised in generating respect for the traditions, religions and cultures of others? It would be difficult in future for anyone to remain ignorant of these aspects in the shrinking world. The new education of 21st Century must respond through its principles, practices and policies towards these issues.

'Learning to be' is the fourth pillar of education. This, of course, was the title of the Faure Report (1972). There, a fear was expressed that the world

would be dehumanised as a result of technical change. Education at that stage was perceived to 'enable person to solve his own problems, make his own decisions and shoulder his own responsibilities'. The Commission finds greater legitimacy in the imperative of the statement. It would be necessary to understand that the imperative is not simply for the individual, it is to be understood in terms of groups, communities and societies.

All the four pillars identified could probably be summarised in terms of education being the modality that prepares a person to become. Hence learning to become would be one of the terms that would be globally used in coming years. The educational environment extends far beyond its commonly understood frame and mandate.

The Current Crises

The economic crisis is being faced in each country, though in varying proportions. This is as prominent before the developed countries as is critical in the developing countries. Education systems are worst sufferers. In India, the resources available for education are mostly utilised for payment of salaries to the teachers. There are instances where not more than 3 to 4 per cent of the resources are available for programmes, innovations and other initiatives. This naturally leaves little scope for the initiative on the part of individual teacher. The state governments find education systems as a major drain on their resources. Even universities are feeling the pinch of resource crunch. Alternatives of augmenting resources in education at different stages are being explored though not necessarily with much success.

The crisis of ideology of progress is significant though not so evident. There are serious diversities amongst the nations on the social and cultural objectives of progress and development. The issues of culture, religion and history take a very different shape when these are handled with emotion and not with objectivity. The nature and content of education are generally the legacy of alien systems. Several factors have not allowed the growth of indigenous education system in most of the developing countries. This trend needs to be reversed and reversed early.

The equality of opportunity in terms of access and success to the girl child is being professed by practically every nation. The suffering of the girl

child continues more or less on the same level as earlier. The materialistic values are taking precedence over all others and it is difficult to find persons of distinction who have become so because of their qualities, commitment and service to others on the social and cultural fronts. Many of the traditions of respect and regard for others are being relegated to the background. The younger generation is keen to take over much before they find themselves fully equipped and prepared for the same. These are the issues which can no longer evade the attention of education systems. In the Commission's report, such strains are visible throughout.

The Crucial Issues

Globally, as well as in the national context, an indepth examination is necessary to evolve strategies that would make education a key factor in development. The societal expectation from education is obviously of a better quality of life, in fact, of 'better and higher quality of life'. Towards this, education must perform a three fold function — economic, scientific and cultural. Each area requires competent and creative individuals to constitute workforce that would understand, adapt and utilise the new technologies and techniques. While economic development remains a major objective, the other components like responsible management of physical and human environments are equally significant. Every citizen should remain rooted to his own culture and, at the same time, open to other cultures and committed to the 'progress of the society'.

Education system is known for its inertia towards change. Philip Coombs in his famous treatise "The World Crises in Education — The View from the Eighties", analysed this and finds that in education even a small change is difficult. He attempts to elaborate the same :

The 1970s witnessed substantial changes and innovations in formal education systems all around the world, in their structures, objectives, curricula, teachers and teaching methods, and relations with their environment. Nonetheless, if one were to take a global photograph of all the world's schools and colleges and universities on a given day in the early 1980s, most would look almost exactly as they did in a picture taken 10, 20 or 30 years ago. As the French say, "plus ca change, plus c'est la meme chose" — the more things change the more they stay the

same.

This aspect has also been examined thoroughly by Michael Fullan (1991) :

The shame of educational change is the squandering of good intentions and the waste of resources in light of personal and societal needs of great human consequence. The capacity to bring change and the capacity to bring about improvement are two different matters. Change is everywhere, progress is not. The more things change the more they remain the same, if we do not learn our lessons that a different mind — and action-set is required.

The education systems every where at this stage, per force, have to change. While there are serious doubts and uncertainties on the very nature and scope of educational process, it still continues to be recognised as a most potent modality to prepare human beings to understand change, analyse it and evolve strategies to be a part of the same. It is education alone which has the potential to resolve whole range of issues and problems which throw communities and societies into a state of flux and turmoil. This includes social values, formal structures, gender issues, issues of minorities, linguistic issues, process of development and depletion of environment. Education systems globally must get mentally prepared for change and become a part of the change by contributing to the same effectively and forcefully.

The issues of relationship between the education systems and the governments shall become more and more critical in years to come. In practically every developing country there is a situation of resource crunch. International agencies are coming in the picture. Communities in some countries atleast are drifting away from their responsibility to educational systems. There is added emphasis in educational policies to revitalise the close relationship between the community and the schools. There are efforts to utilise the traditional bonds that have existed between the two in many countries. Most of the governments, due to paucity of resources and lack of expertise, are attempting to find alternative support systems to educational expansion and development. In India, constitutional changes have been brought about to devolve power and responsibility to the village level bodies to manage elementary education. These steps are in tune with the thinking of Mahatma Gandhi who, while pleading

for indigenous system for education in India, made the following statement in 1931 :

That does not finish the picture. We have the education of this future state. I say without fear of my figures being challenged successfully, that today India is more illiterate than it was fifty or a hundred years ago, and so is Burma, because the British administrators, when they came to India, instead of taking hold of things as they were, began to root them out. They scratched the soil and began to look at the root, and left the root like that, and the beautiful tree perished. The village schools were not good enough for the British administrator, so he came out with his programme. Every school must have so much paraphernalia, building, and so forth. Well, there were no such schools at all. There are statistics left by a British administrator which show that, in places where they have carried out a survey, ancient schools have gone by the board, because there was no recognition for these schools, and the schools established after the European pattern were too expensive for the people, and therefore they could not possibly overtake the thing. I defy anybody to fulfil a programme of compulsory primary education of these masses inside of a century. This very poor country of mine is ill able to sustain such an expensive method of education. Our state would revive the old village schoolmaster and dot every village with a school both for boys and girls.

Promulgation of the values of openness is the fourth major issue before the education system as identified by the Delors Commission. How far education can contribute to world peace is a moot question? Is it possible to identify such purport of education that would address to every citizen of the globe universally? The only universal language can be the language of peace and the language of kindness to develop a cohesive global harmony, inspite of all the possible diversities which are emotionally close to various groups and communities. While keeping full faith and confidence in the superiority of each language, culture and heritage, education alone would bring about transformation that would prepare every individual to regard the culture and heritage of others on the same footing and with same regard as his own. Education in future must open the possibilities for greater openness to bring

about the strong cohesive society.

A Comprehensive Statement

Report to UNESCO of the International Commission on Education for the Twenty-first Century is in fact a comprehensive statement on all aspects of education that are significantly relevant today and would become prominently so in years to come. While emphasising the need to look ahead and to initiate strategies for designing and building the new future, the report effectively reiterates criticality of learning throughout life. The approach, methodology and the contents of this learning would certainly be different at each stage of educational development which are obviously linked to the developments in other sectors of human activity. The utopian thought of global village is now a visible reality. Human activity has been globalised. Developments in communication technologies have acquired explosive proportions. Many facets of global interdependence are much better understood today. Education shall remain the major tool for such understanding in future as well. The world must prepare for greater mutual understanding. Future requires each individual to develop greater sense of responsibility for others. Consequently, universalization of elementary education could not leave the majority at the discretion of the minority of such people who are classified as successful. Each one deserves a say in the future of the society and his own pursuits in life.

Education policies shall have to be sufficiently diversified. These should aim at social inclusion and remove all the causes of social exclusion. Education must strive to nurture the desire to live together and encourage greater social cohesion. This could certainly lead towards national integration. None can be allowed to lag behind. Minorities, migratory population, tribes and economically weaker section need to be provided access to education without fail and at an early date. Alongwith this they also deserve, wherever necessary through positive discrimination, equality of opportunity for success. Only such education would achieve the objective of preparing conscious and active citizens.

Over the last few years, the need to strengthen and expand basic education has been emphasised globally. In several countries the programmes of adult literacy have also been implemented with reasonable success. Corresponding initiatives at secondary and university stages depend upon stage of

development of the country concerned, the population issues, availability of national resources and the relationships of schools to the community. Strong bondage amongst these could enhance the pace as well as the relevance of basic education.

All educational initiatives are critically linked to the quality of teachers who need to update their knowledge and skills regularly. The emphasis is now shifting from skills to competencies. Acquisition and regular renewal of competencies would remain nodal to the teaching learning process. Education policies shall have to provide for upgradation of quality of teacher preparation, orientation and training. Only such initiatives would lead to qualitative improvement in the efficacy of the school systems.

The Commission has views and identified suggestions which have far-reaching implications. It has highlighted the role of political authority and advocates bringing into operation of public and private partnerships in order to counterbalance the forces of financial constraints. It advocates the diversification and improvement of distance education, better use of these technologies in adult education and in in-service training of teachers. It makes very specific suggestion that a quarter of development aid should be devoted to the funding of education and recommends that debt swaps should be encouraged 'in order to offset the adverse effect of adjustment policies and policies for the reduction of domestic and foreign deficits on educational spending'. Would there be many takers!

The nine chapters of the commission report are augmented by eleven contributions by its individual members which are included in the Epilogue. Dr. Karan Singh's contribution entitled 'Education for the Global Society' advocates propagation of the holistic education philosophy for the 21st Century. He includes the following premises :

- The planet earth is an inter-linked extended family and all differences of place and religion, nationality and ideology, economic and social status must be viewed in the context of global humanity.
- Ecology of planet earth must be preserved.
- Fundamentalism, hatred, jealousy and all such factors must be overcome as we move into the next century.

- The great religions of the world must strive for the welfare of humanity and through dialogue, strengthen the golden thread of spiral aspirations.

Pointers and Recommendations

All the nine chapters of the Commission's report have at the end brief statements under the above caption. Some of these shall be relevant and pertinent for educational policy makers everywhere.

The Commission emphasises worldwide interdependence and globalisation as major forces in contemporary life. These shall have a deep imprint on the life of every citizen in the 21st century. There is a real danger of a widening gap between the minority of people capable of finding their way successfully in the new world and the majority of those who may get relegated to the background. Universal education alone can help people in reducing the gap. Towards this, sufficient diversification of educational policies would be essential as that alone can eventually eliminate the causes of social exclusion. It must be remembered that education alone cannot solve all the problems. It can however foster the 'desire to live together, which is a basic component of social cohesion and national identity'. Integration of minority groups of various kinds and democratic participation could help educational systems to achieve the desired objectives of equality, social justice and equity.

The educational policies and programmes need to synchronise more and more with the development policies. This is essential towards strengthening cognitive capital of the country, in encouraging new initiatives, teamwork, self-employment and other aspects related to the aspirations of the society. In this light, the four pillars of learning i.e. to know, to do, to live together and to be have been identified and elaborated in the report. These have been organically linked to the concept of learning throughout life, which has been identified as the 'key that gives access to the 21st century'. Strengthening of basic education, its expansion wherever necessary and maintenance of quality should open the door to new avenues even in the most deprived countries. On the higher education side, qualified and competent manpower needs to be prepared for research, teaching specialised training courses to meet the needs of economic and social life and to cater for various aspects of lifelong education. In a

country like India, the diversity of secondary schools could provide vast opportunities to young persons towards acquiring skills and developing positive attitude towards enterprise and self-employment.

Teachers shall be functioning in vastly different and probably difficult situations in future. While scientific and technological developments would be of great assistance, the changing social and cultural scenario would bring in additional responsibilities. Professionally they shall have to be prepared for new skills, new competencies and ever changing impact of communication technologies. Professional exchanges and interactions, apart from regular and planned programmes, could be of much help and assistance. In fact the inter-linkages between institutions and organisations within the country and those outside the country shall play a major role in educational development in the 21st century. Obviously, those who are ahead in educational achievements shall have added obligations towards the remaining ones. They have to come forward to ensure not only educational expansion but also upgradation of the quality and professionalism in these countries.

The 'global village' shall make a sharp distinction between those who are very near the utopian achievement of relevant and indigenous education and the others who are still struggling far behind. The Commission presents a global viewpoint and hopefully, it shall help the latter category to achieve its objectives and the former to be active partners in the same.

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The Dilemma of Higher Education Reform

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Philip G. Altbach**

There has been an unremitting clamour from many about reforming undergraduate education in America. The professoriate is not unmindful of this din. Yet, it seems, little is done to improve the undergraduate curriculum. This is not as inexplicable as it appears to be, and we will try to explain why it is so.

Reform can mean many things. In the broadest sense, it refers to improving or changing for the better, and all parties would surely agree that they have this in mind. Still, there are other meanings of "reform". It refers to eliminating faults, abuses, or evil ways. When looked at in this way, most academics do not believe that there are serious faults, abuses, or evils that need to be fixed. And even those who do not deny that there are significant problems, might not agree on what they are. A considerable part of the problem is that the cries for reform come from top administrators who are faced with budgetary problems and the occasional wrath of legislators or editorial writers, or from a very small but influential group of "critics" who have access to the media. The fact is that there is very little demand for change from the grassroots. When asked by pollsters, consumers of higher education, students, are generally happy with the education that they are receiving. Most parents, although unhappy about the high cost of a college degree, have no basic gripes about academe. We have found that the vast majority of professors are generally satisfied with conditions on campus and with the overall focus of the curriculum and of their teaching.

Reforms means different things to different constituencies.

- * Administrators see reform as more efficient delivery of educational services, especially teach-

ing. Professors, they contend, should teach more students in larger classes. More part-timers should be hired because they are less expensive and more easily fired. There should be more accountability and measurement of teaching, research, and other campus activities.

- * State legislators see reform as more governmental control over campuses and as increased efficiency so that state budgetary allocations can be further slashed.
- * Editorialists and off-campus pundits generally have an ideological axe to grind. Critics from the right such as Charles J. Sykes and Dinesh D'Souza see the campuses as hotbeds of radicalism and dissent, and argue that professors are a lazy bunch generally committed to subverting the youth. They are also in favour of cutting campus expenditures. They offer the thinnest evidence to support their contentions.

We believe that the focus should be mainly on the on-campus debate since it is the attitudes and actions of the professoriate that has the greatest impact on the everyday realities of academic life. Its influence over the curriculum remains dominant.

It is said by many that there is a struggle on college and university campuses among faculty for ideological supremacy. There are at least three contending camps. First, there are those who insist that institutions of higher learning should be used as engines of economic growth. Second, there are those who argue that they should be engines of social change. Third, there are those who are committed to having students learn their cultural traditions through science, mathematics, philosophy, literature, and history. Should students be taught skills that will increase their economic prospects and the country's ability to compete in the global economy or should they be taught about the values of tolerance and injustice, about social inclusiveness and multiculturalism? Or is it simply enough to teach the so-called canon? There is much talk of reforming

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higher education, but the term clearly does not have the same meaning for all academics.

To show the diversity of faculty opinion, we analyzed the responses of nearly 3,400 full-time faculty who participated in a study conducted by the Carnegie Foundation for the Advancement of Teaching. In the first place, it is worth noting that many faculty do not accept that assumption that institutions of higher learning are in need of reform. Slightly less than half of those who responded were in agreement that faculty should spend more time with students outside the classroom. Those who taught in second echelon liberal arts colleges, especially in public institutions, were most likely to believe that undergraduates should be given more attention.

Over three-quarters of the professoriate felt that preparing students for work was the highest or a high priority, and an even larger number (80 per cent) felt that strengthening the nation's capacity to compete internationally should be the highest or a high priority in a college or university education. Those who taught in the most prestigious liberal arts colleges were to a significant degree less likely to hold these views, as were humanities faculty members in all types of institutions. On the other hand, faculty in engineering, the health sciences, and in technical programs were most likely to hold this view.

A strikingly smaller proportion of the professoriate was convinced that preserving the cultural heritage should be an important goal of undergraduate education. Not surprisingly, those who taught in liberal arts colleges (especially faculty in the humanities, fine arts, and education) were most likely to express this opinion, while professors at research universities, especially those in the biological sciences and engineering, were least committed to this goal.

At the same time, almost three-fourths of the professoriate agreed that institutions of higher learning should be active in helping resolve basic social problems. Those most committed were females, most particularly social scientists who held appointments at liberal arts colleges. As we expected, those in a department of engineering or physical science did not place as great an emphasis on these sorts of issues.

Faculty attitudes about multiculturalism and racial/ethnic studies in the curriculum show considerable disagreement. When asked, in the Carnegie survey, about a variety of issues relating to multiculturalism in the curriculum, more than one-third refused to take a position on the topics, preferring a neutral response. Close to one-fifth of the professoriate expressed opposition to changing the curriculum to ensure more exposure to African-Americans, women, and a variety of ethnic groups. However, 65 per cent believe that the growing emphasis on multiculturalism nationwide will have a positive affect on the curriculum. These attitudes reflect the public debate on the canon and related curricular issues. The American professoriate is simply divided and perhaps even confused on some of the central curricular issues of the day. It is not surprising, therefore, that many colleges and universities have not moved decisively.

This discussion highlights several dilemmas, and shows how textured campus life is. Those at the heart of the academic enterprise, who after all still have the dominant role in shaping the curriculum and determining what happens in the classroom are not entirely convinced that there is a "crisis" on campus, and in any case are divided about what to do about it. When asked about their views concerning the goals of the undergraduate curriculum, academics indicated a variety of opinions; these varied by the type of institution where faculty taught as well as their disciplines. Given the range of views among faculty and administrators, and the seemingly lack of consensus on campus about reform, and indeed about the goals of undergraduate education, it is unlikely that we will soon see dramatic reform on the American campus. Indeed, there might be only the smallest changes.

Yet, this conclusion could be taken as pessimistic. There was, after all, some reform of undergraduate education a decade ago when parts of the liberal arts curriculum, weakened in the turmoil of the 1960s, was restored. From history, we know that academic institutions the world over change very slowly. It is both a strength and a weakness of colleges and universities that they carefully consider options before acting on them. Academics are clearly wedded to Matthew Arnold's caveat that "no one ought to meddle with the universities, who does not know them well and love them well."

The Philosophy of Life

Eminent architect, Padma Shri Charles Correa delivered the Convocation Address at the fourteenth convocation of the School of Planning and Architecture, New Delhi. He said, "If you continue to learn as you go through life, you will find yourself slowly building up a body of attitudes and values, which gradually becomes your philosophy. It doesn't have to be "original" (whatever that word means). It can be shared — in fact, I think it is better when it is shared. But these attitudes, these values, become your unwritten agenda, which you bring to the random commissions that come your way. So that each of these projects incorporates, naturally and intuitively, (and I would add, compulsively), the values you deem true." Excerpts

Architecture and Urban Planning don't exist in a vacuum — they reflect and influence the social and cultural processes around them. And so it was very encouraging to learn that you are now contemplating moving to a new building on this campus. This will indeed be a great leap forward. Not only could it help to meld the different departments of SPA together, but it will also give you access to the many diverse disciplines taught at the neighbouring campus of JNU. It is from such *manthan*, such churning, that new ideas and new energies emerge.

This is indeed a point of relevance to you today. How much we grow depends on the issues we have the good fortune to address. The difference between the Bauhaus and any of today's design schools is not just a matter of talent. Because in every generation, God distributes talent equally and uniformly, like rainfall. What changes are the issues. Back in the 1930's, when Europe was in artistic and social turmoil, faculty and students at the Bauhaus chose to address certain fundamental issues about the nature of design. This made all the difference to their work — and to how each of them as an individual could grow.

Which brings to mind a story told to me by Arvind Talati, a young Indian architect who followed Doshi at Corbusier's office in Paris. After working two years or so, when Talati decided to return to India, Corbusier (who was really a taciturn old man of over 70 by then) came to his desk and said: "I hear you are leaving — where are you going?" Talati replied: "To Bombay." "What will you do there?" "Well, I don't know, but I'm sure I'll find a job". Corbusier looked at him and said: "Be careful, eh? Whenever you get to the station, there's always a train leaving. Don't jump on just because it's leaving. Make sure it's your train."

Make sure it's your train — that's really wonderful advice for young architects and planners. You know, it's not so much the talent you possess but the nourishment it gets, that makes you grow. And this nourishment can only come from the work you are doing. So if your first job is on a train going the wrong way, it really doesn't matter how much you are paid or how easy your life is. If your talent is denied the nourishment it needs, it will gradually dry up and atrophy. This is why, ten or twenty years down the line, you will find that those among you who are doing the most in-

teresting and significant work are not necessarily those who graduate at the top of your class — but those of you who had the good fortune to address the right issues.

Now how do we recognise the right train when it comes along? This is a crucial question — and it doesn't help to pontificate about the answer because, by definition, for each one of us the right train is a little bit different. To recognise the right train I suggest you begin by concentrating on those aspects of Architecture or Urban Planning that you enjoy doing. You know, if you really like doing something, you are probably going to do it well. Someone once said that all intelligence is a matter of curiosity — and what is called "genius" is just a kind of passionate curiosity.

So I've always told my children that they should take up a line they are interested in — that way, they have a fighting chance of getting to be good at what they're doing. But the other day, I came across some writer who had phrased it very much better. He said his advice to young people involved 5 Steps:

- Step 1: Identify what it is you enjoy doing — and know you do well. (It could be anything — singing? painting? mathematics? tap dancing?)
- Step 2: Now concentrate and do it the very best you can.
- Step 3: The most difficult step of all: Look very very objectively at what you have just done and ask yourself: is it really good?
- Step 4: If the answer to Step 3 is YES, then just go ahead and keep doing it.
- Step 5: Someone will step forward and pay you to do what you're doing.

As the writer pointed out, most young people get exactly the opposite advice. So the poor things start by choosing a job that pays them very well. Then when they find they don't enjoy their work, they tell themselves that if they try very hard, they'll get to really like it. So they work very diligently indeed — and then of course find they now hate their job more than ever. Don't let that happen to you.

On the contrary — if you do something you enjoy, you become your own best teacher. Don't you remember the story of Eklavya, the little untouchable boy who became the finest archer of all? He didn't dare approach the great *Brahmin* teacher Dronacharya, but when he practiced in the forest he placed a clay image of Dronacharya in front of a tree and told himself that the greatest *guru* in the land was watching him. That is a profound story — because it makes vivid the most important lesson of all: the ability each of us has, as we go through life, to teach ourselves — to be a Perennial Student. I don't know if a creative ability like Poetry or Painting or Architecture can be taught. But I know it can be learnt.

And you can learn because of the standards you raise within yourself. For some people, the Dronacharya observing them is perhaps a sense of History — making vivid the issues that need to be addressed. Or it could be your determination, as a Physical Planner, to provide greater Equity in our towns and cities. Whatever it be, it motivates you and makes you want to learn.

Architecture is not as pure an art as, say Poetry or Painting. Artists and poets can decide on what painting or poem they feel like creating. But the Architect, like

the Planner, doesn't usually get to determine the problem he must work on next, but must tackle a series of seemingly random commissions — and this goes on throughout his career. And yet, an architect like Corbusier or Wright manages to somehow find the common issues and attitudes that run through these many, many diverse commissions and build them slowly into a body of work which is consistent. It's like a broken-field run in football or hockey, when a player gets the ball at one end of the field — and then takes it all the way to the other and scores a goal. It's an incredible feat. And only when we watch the slow-motion replay that we begin to understand the hundreds of split-second decisions which ultimately build up the pattern which crosses the entire length of the playing field.

How is it done? You are young today, but if you continue to learn as you go through life, you will find yourself slowly building up a body of attitudes and values, which gradually becomes your philosophy. It doesn't have to be "original" (whatever that word means). It can be shared — in fact, I think it is better when it is shared. But these attitudes, these values, become your unwritten agenda, which you bring to the random commission that comes your way. So that each of these projects incorporates, naturally and intuitively, (and I would add, compulsively), the values you deem true. Architects and Planners don't live in an Ivory Tower — like poets. No, to build is to understand the rough and tumble of the *bazaar*, the real politick of everyday life. But I think that perhaps this is our strength: to be part of the *bazaar* — it keeps us human.

Many years ago, when I had just started my office, the artist

Akbar Padamsee who is a good friend of mine, came over to see what I was designing. After watching for a while, Akbar said: "You know, Charles, I could never work like you architects". I said: "What do you mean?" And he replied: "Well, When I am painting and I want to use some colour, say blue, I don't have a client watching me and asking: why are you using blue? And then I'd have to say something like: well, it's very cheap this month — there's a sale on. You architects have to justify your decisions, while they are in the process of being made, to a character who doesn't understand what you're doing" Akbar was right — and it made me very sad. Then a few months later Akbar had an exhibition of his work and a lot of people showed up. You know what those Art openings are like — people are so busy talking to each other that no one throws more than a passing glance at the paintings on the walls. And poor Akbar was standing in the midst of all that small-talk, looking expectantly around, hoping to get some appreciative feedback of the work he had slaved on for two years and more. I said to Akbar: I'd never want to go through that. Because one thing wonderful about a building — when it's over, it's over. It doesn't really make a difference whether the critics like it or not. Supposing they praise it, but it isn't really any good — then since a building lasts so long, History will change their judgment. And the other way round. So just give each and every one of your projects your best shot. You alone perhaps really know what went right and what went wrong — and if you're listening to the critic (the teacher) within you, you'll raise your standards and go on to do something even better on the next project.

Today is really a big day in your lives: you have become full-fledged architects, urban designers and planners. But I must warn you: none of these fields are great for making big money. If that's what you want, then switch to law or surgery. A successful surgeon makes a hundred-fold more than the average practitioner, but a great architect like Wright or Mies charged the same fees as you or me. No, our profession has other rewards for us. The first we have already discussed: the chance to grow. The second, equally crucial, the fact that our work is holistic. That means to say, if you change the detail of how two walls meet at the corner of your building, this will probably change the column grid, and so forth, all the way back to the overall concept of the building itself. And vice versa. And the same thing happens on the urban scale. If you change how two streets meet at the corner of a block, then the implications will ripple all the way back to the layout of the neighbourhood, back and back, all the way to the Master Plan for the whole city. From the part to the whole — and back again to the part. Back and forth. Design is a reiterative process, not a linear one. To design is to understand these connections.

A friend of mine who was working in Iran, Jack Robertson, put it very well. He said: "You know, it's easy to design a house in the *bazaar* in Isfahan because you know what the whole machine looks like — so you can easily design a spare part. And the same is true of the old centre of Jaipur, or of the row-houses around a Georgian Square in London. "In contrast" Jack said, "American downtown today looks like a bunch of Spare Parts without anyone having the foggiest notion of what the whole Ma-

chine will look like. And this is the urban model that the U.S. is exporting to towns and cities throughout the planet!"

That's really a brilliant analysis. Architects can't design viable Spare Parts since they don't have responsibility for conceptualizing the overall machine, and Urban Designers can't visualize the Machine unless they have an incisive hands-on knowledge of what each Spare Part could be. All of you at SPA — you aren't separate departments — you're really just different facets of the same equation. In fact right until this century, the Architect and the Urban Designer were one and the same person. Hence Hausmann's Paris — or Jai Singh's Jaipur. It's only when our schools began to break these up into different subjects, (and then into different departments, located at different corners of the building), that the rot set in.

So I will end by putting be-

fore you a holistic problem: for us in urban India, What should be the Spare Part and the machine? In other words, what kind of urban habitat can we afford that we would really enjoy living in, with our kind of resources, at our economic level, and in consonance with the climate, culture, instincts and life-styles of the people? This is indeed a fundamental question — as crucial as any of the Bauhaus ever addressed. To search for the answer is the best possible training a student could have. It will involve getting all the various disciplines and departments of SPA together and making them see they are all one. It would mean conceptualizing and launching an academic program of joint studios, seminars and classes. Slowly, piece by piece, the answers will begin to surface. I can't think of a more exciting — and more vital — program for any school. It's amazing it hasn't been done as yet.

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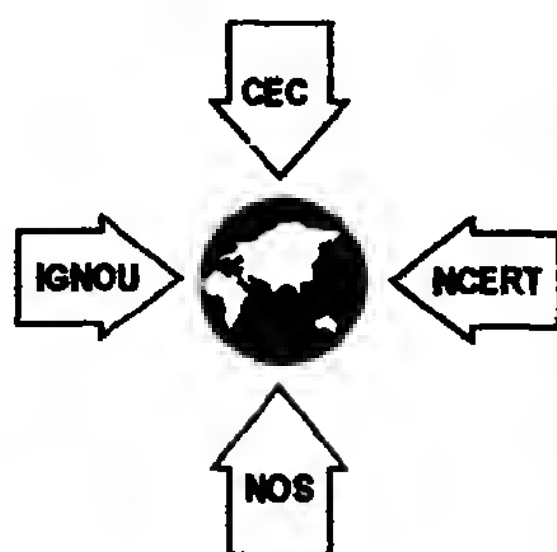
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Revamping Teacher Education

The National Council of Teacher Education (NCTE) has taken a welcome initiative to revamp the outmoded teacher education programmes by issuing a *discussion document* on "Curriculum Framework for Teacher Education". The *document* does not make any prescriptive suggestions on the nature, duration or content of teacher education programmes, but only identifies major issues and challenges before teachers and teacher education. The Council seeks a countrywide debate on the *document* to develop a national consensus on guidelines for improving teacher education, designing futuristic programmes, developing curriculum and evolving transactional strategies to meet the demands of the 21st century. Towards this end, the Council has developed an information blank which may be obtained by those desirous of sending in their opinion on any aspect of teacher education from the office of the NCTE, 16 Mahatma Gandhi Marg, I.P. Estate, New Delhi-110 002.

The opening chapter of the *document*, "The Context", highlights different areas of concern in teacher education. We are pleased to reproduce this chapter for the benefit of our readers.

The Scenario of Teacher Education

The need for improved levels of educational participation for overall progress is well recognised. The key role of educational institutions in realising it is reflected in a variety of efforts to transform the nature and functions of education — both formal as well as non-formal — at various stages/levels in keeping with the cherished values and aspirations of the people. The constitutional commitment to the Universalisation of Elementary Education (UEE) and the Delhi Declaration in respect of Education For All (EFA) are being hailed as positive steps for ensuring the country's overall development. The UEE and EFA have implications for the growth of education at secondary and tertiary levels. Wider accessibility to quality education is considered essential for satisfactory development. This has necessitated improvements in the system of teacher education

so as to prepare teachers of quality.

Various Commissions and Committees appointed by the Central and the State Governments in recent decades have all emphasised the need for quality teacher education suited to the needs of the educational system — both formal as well as non-formal.

India has indeed a monolithic system of education. There are of now as many as 5.9 lakh Primary Schools, 1.7 lakh Elementary Schools and 95 thousand High/Higher Secondary Schools in the country. As against this there are 1221 teachers training institutions for preparing elementary teachers and 633 colleges of education/university departments preparing teachers for secondary and higher secondary schools. Out of about 4.4 million teachers in the country nearly 2.9 million are teaching at the primary/elementary level (Selected Educational Statistics, 1995-96, MHRD,

Govt. of India, New Delhi.) A sizeable number of them are untrained or poorly trained. In certain regions, like the North-East, there are even under-qualified teachers. As far as in-service education is concerned the situation is very dismal. It is estimated that not more than 40% of the teachers are provided in-service teacher education in an organised manner. Regarding non-formal education, though a number of models are in vogue in various states in the country, precious little has so far been done for preparing teachers and other functionaries for the non-formal system.

Some steps have, of course, been taken for improvement in the system of teacher education in recent decades. Four-year integrated teacher education programmes were started in the Regional Colleges of Education. The B.Ed. (Elementary) and the B.Ed. (Special Education) programmes have been started in certain universities. The University Grants Commission set up a task force for preparing improved courses in teacher education at various levels and the Group reports are now available. However, there is a feeling that all is not well with teacher education.

The National Policy on Education 1986 up-dated in 1992 has emphasised teacher education as a continuous process, its pre-service and in-service components being inseparable. The NPE, among other things, has pointed out the following in respect of teacher education :

- (a) Professional commitment and overall competencies of teachers leave much to be desired;
- (b) The quality of pre-service

education has not only not improved with recent developments in pedagogical science, but has actually shown signs of deterioration;

- (c) Teacher education programmes consist mainly of pre-service teachers training, with practically no systematic programmes of in-service training, facilities for which are lacking.

Nearly 400 District Institutes of Education and Training (DIET) have been established in pursuance of the NPE. The DIETs are charged with the responsibility of organising pre-service and in-service education of elementary school teachers. Likewise, Colleges of Teacher Education (CTEs) and Institutes of Advanced Studies in Education (IASEs) have been given the responsibility of introducing innovations in teacher education programmes at the secondary and higher secondary stages and in vocational education. However, the programmes of these institutions need guidance for launching quality programmes which require constant monitoring.

The National Council for Teacher Education (NCTE) has been in existence for the last more than two decades and has taken steps as regards quality improvement in teacher education. Among other activities NCTE's efforts to prepare Teacher Education Curriculum Framework in 1978 and revising it in 1988 are considered milestones in teacher education. Consequently, teacher education curricula witnessed changes in teacher preparation programmes in various universities/boards in the country. However, since the NCTE did not have

statutory powers, not much substantial work was done as a follow-up. Now when the NCTE has been made a statutory body, and the teacher education programmes are deficient to meet the educational and social needs, a fresh look at the curriculum framework has acquired a place of prominence and priority.

Teacher Education as an Integral Part of Educational and Social System

The education of teachers is an integral part of the educational system, which in itself is closely linked with the social system. Any curriculum of teacher education, which is not in conformity with the changing educational and social realities of a given society, the ultimate determinants of its quality and character, therefore, becomes unproductive.

Teacher Education and National and Social Goals

Ideally speaking, the educational system needs to be designed by every society to meet its own requirements. There are a variety of factors and forces operating in any society which affect education more than those operating within the system of education itself. A curriculum of teacher education which does not appropriately respond to these 'external and internal factors and forces', and fails to transmit the cultural heritage, does not fulfil the aspirations and expectations of the people. It may not prepare teachers fully capable of serving the assigned purpose. The curriculum of teacher education is an important instrument for the realization of national and educational goals. Any change in the educational system, demands a corresponding adjustment in the

curriculum of the teacher education. Curriculum renewal, therefore, needs to be planned as a continuous process.

Plural Society and National Integration

To establish a secular, socialist and democratic society in India, to ensure equality of status and opportunity, freedom and justice to its citizens, and to obliterate every kind of discrimination, are the constitutional obligations of the State. For achieving these objectives, the closed backward looking, unjust and stagnant society has to be transformed into the one which is open, forward-looking, just and progressive. To strengthen national and social cohesion in a diverse and plural society, to accelerate the process of economic growth, to improve the life of the down-trodden and the people living below the poverty line, to remove the widely prevalent ignorance, superstition and prejudices from the masses, to inculcate the scientific temper and to develop a critical awareness about the realities of Indian life are some of the issues which call for immediate attention. The teachers and the teacher educators have a special role to play in this venture.

Homogeneous Curriculum in a Heterogeneous Society

Any attempt to impose a rigid, uniform and common curriculum on a plural and heterogeneous society is not desirable. The danger of social fragmentation cannot be averted by imposing a highly homogeneous curriculum when the society itself is based upon diversity and heterogeneity. The teacher education has to take note of this situation. The Indian

reality demands that diversity has to be utilised for the promotion of national and social cohesion.

Nature of the State and Nature of Polity

The Indian State is secular. The Indian society, however, is religious. There is a contradiction between the nature of the State and the nature of the polity. Education and for that matter the teacher education are powerful means of promoting secular consciousness among teachers who, in turn, would promote the same among their pupils.

Human Resource and Economic Development

There are problems that seek their immediate solution and demand a realistic coordination between the economic planning and manpower planning. Education is an effective means of both human resource development and economic development. The vocationalization of education and introduction of socially useful productive work in secondary schools will have to be given a meaningful direction. The attitude towards the 'manual labour' needs a transformation. Dignity of labour and morality of workmanship will have to be inculcated. It needs to be examined in specific terms as to whether the curriculum of teacher education can be so modified as to promote such attitudes as are necessary for the emergence of a new economic order.

Migration from Rural to Urban Areas and Alienation of Educated Youth

The flight of educated rural youth from the village to the city creates not only imbalance of pop-

ulation scenario and turns the city over-populated but also makes the rural areas devoid of skilled, trained and educated manpower. The fruits of education do not infiltrate the village community. In the cities these young men get marginalised, face the problems of unemployment, adjustment, acceptability and habitation resulting into severe alienation. The Indian education has urban orientation. A fresh look into whether the curriculum of teacher education can be recast or/and methodology of transacting the same adjusted/modified so as to enable teachers to give a rural bias to whatever subject they teach for reorienting the youth, as and when needed.

Indian education being still colonial in its nature and complexion, often produces young men and women who may become alienated and misfit in the society. They get cut off from their family, community, social group and culture. Alienation leads to anarchic and adventurous behaviour resulting in the development of destructive tendencies on the one hand and increases monotony in life on the other. This is a burning problem which education has created and it needs an urgent solution.

Unemployment

The present educational system of the country tends to make the youth unemployable. The vocational stream at the plus 2 stage needs to be streamlined. This calls for, among other things, special programmes in teacher education.

Individual Freedom and Social Compulsions

The democratic socialist soci-

ety which the founding fathers of Indian constitution envisaged to establish in the country attempts to achieve a synthesis between individual freedom and social compulsions'. It visualises a planned social order which imposes some kind of restrictions on the individual and his freedom. But excessive restriction on man makes him devoid of individual initiative and creativity and retards the development of personality. Freedom beyond a point may not always lead to responsible and restrained behaviour. Both the approaches can achieve only partial success in the absence of proper education. 'Whether the curriculum of teacher education can be so modified as to make provisions for arresting the development of possessive tendencies and liberating those that are creative and constructive to solve the problem', needs to be discussed.

The Philosophy of Equality and its Ramifications for Teacher Education

In any hierarchical society like India equality, though philosophically professed, is yet far from being realised and practised. The essence of equality does not lie in extending identical or equal treatment to all. Equality, therefore, demands a positive discriminatory treatment. It is a process. The Indian teacher needs an orientation in the philosophy of equality so that it may get acceptance. It is, therefore, necessary to examine whether curriculum of teacher education can lay proper emphasis on different aspects of equality (not to be confused with identity) with all its manifestations.

For all practical purposes, a sizeable number of girls do not attend school. It is clear that the

girl child shall not be able to reach the school as long as the women have a lower status in society. The gradual but steady rise in the women's movements, both within India and at the global level, has begun to challenge the patriarchy which is at the foundation of continued subjugation of women in most of the societies. Teacher education curriculum needs to acknowledge the central need to sensitise the teachers (including women teachers) towards the issues of women empowerment and the growing challenge to patriarchy.

One of the paramount considerations in education and teacher education would be a realistic perception and understanding of the situations being faced and likely to be faced by the children in future. With more than 1/3rd of the school age children outside the school system and alarmingly high dropout rates, the situation is going to be tough, necessitating extra efforts in planning and professional inputs. There would be other sensitive and critical issues like that of population and poverty. The case of the girl child would determine the extent of success of educational endeavours. The country needs more women teachers, particularly in remote, rural and far flung areas. Teacher education, therefore, needs to respond to the sensitivities of the Indian Child who would be facing a very different world in the initial stages itself. The issues of poverty and inequality can neither be ignored easily nor solved instantly. The task of teachers, in this context becomes sensitive, complex and challenging in the coming decades.

The Philosophy of Social Justice

The impact of inclusion of the philosophy of 'social justice' has to be properly understood along with its consequences. The reservation policy of the State for the SCs and STs along with the reservation for the OBCs has tended to transform the nature of the educational system. A large number of first generation learners and teachers now find their place in educational institutions. They have to increasingly get acceptability. Its another impact is on the academic standards which need to be maintained. The conflict between quality and excellence on the one hand and the growing number and quantity on the other has to be reconciled.

Role of Teacher Education, Values and Nation Building

A nation is made great by its people, who in turn develop in themselves the qualities of head and heart, who have courage and conviction to act according to the accepted norms of behaviour and who are men and women of character. There has been a persistent erosion of values in the society which need to be re-defined and reinstalled. It is through education and as of necessity through teacher education programmes that this task can be accomplished. But in what ways, remains to be thought of in order to arrive at workable propositions.

The Scientific Philosophy and Nature

The scientific philosophy propounded by Bacon, Des'cartes and Newton which the world believed and practised for a long time has put man against the nature and disturbed the old harmony that existed between the

two. The exploitation of nature became man's sole concern. The imbalances in the ecosystem and degradation of the environment are some of its consequences. The large scale pollution of air, water and food materials, the 'Green House Effect', rise in temperature, change in weather chart, damage to the ozone layer, erosion of soil, increase of carbon and nitrogen contents in the air, growing intake of poisonous substances by man and diminution of non-renewable forms of raw materials and sources of energy are going to create serious problems for man. Environmental awareness has now become necessary. Let us, therefore, examine whether the curriculum of teacher education can take a realistic note of the 'crisis of environment' and help in developing consciousness among the prospective teachers.

Panchayati Raj and Traditional Power Structure

The 73rd Constitutional Amendment introducing Panchayati Raj leading to the decentralization of political and administrative power, a right step in the direction of 'participatory democracy', is an effective means to bring it to the grassroots. The reservations in the Panchayati Raj system to certain categories of people is breaking down the traditional power structure in the rural areas. It has, however, developed misconceptions and apprehensions among the teachers, specially at the elementary level, that local politics will interfere with their work. The teachers will have to develop positive attitude towards it and some kind of emphasis has to be laid on it. All these changes call for a new relationship between the school and the local community.

Teacher in the Community

The teacher is an academic and an intellectual. He/she cannot maintain stony silence at the events that are taking place in the society. As an enlightened person it is his/her moral duty to pass an unbiased judgement and impartial criticism on social events. The academic and social issues are not so independent of each other as people are accustomed to imagine them to be. On the contrary, they are inter-related and inter-dependent. The right of teachers to examine the social events has to be defended. 'An unexamined life', says Socrates, 'is not worth living'. The role of the modern teacher is not confined to teaching alone. He/she is expected to participate in the development programmes of the community life. The question arises as to how this could be integrated with the teacher education programmes.

Teachers for the 21st Century

The teachers who are being educated today will have to pass the major part of their lives in the education system — formal/non-formal — during the twenty-first century. If the present rate of explosion of scientific and technological knowledge continues, in a few years the teachers will find themselves in a world where their present knowledge and teaching skills to an extent would become obsolete. They will have to face the challenge of electronic media and information technology. In course of time, students will not come to teachers that often for acquisition of knowledge, as other efficient avenues for the same would be available to them. They would come just for seeking information about the 'source of knowledge'. The changes likely to

occur in the twenty-first century need to be visualised and suitably incorporated in the curriculum of teacher education.

Education : Theory and Practice

It is felt that education and society need to be in consonance with each other. But in reality whatever is being taught in the schools gets little opportunity for practice. This needs to be examined from the point of view of teacher education curriculum. Let the philosophy of teacher education and its curriculum be oriented, not in despair and disappointment, but in hope.

Changes in Schools Demand Concomitant Changes in Teacher Education

Education of teachers is not an end in itself. Its target is the school, where it is expected to shape the destiny of pupils and prepare citizens for the nation. Any change in the nature, purpose, quality and character of the school demands a concomitant change in teacher education, specially in its curriculum. The implementation of the 10+2 scheme at the school level has transformed the complexion of education to a great extent from the pre-primary to the +2 stage. There has been an increase not only in the quantum of knowledge, being transmitted and negotiated but also in the nature and purpose of this knowledge. Certain new subjects have replaced the old ones whereas certain others have changed their context, orientation, theme and philosophy. These changes at the school level, out of necessity, demand a new pedagogy and evaluation techniques. But the changes at the level of teacher education are lag-

ging far behind the changes demanded by the school system. It is, therefore, essential that the curriculum of the teacher education be suitably reoriented so as to respond to the emerging realities at the school level. All that the teachers are expected to do in their work places, need to be reflected in the teacher education activities and programmes.

Competencies and Skills in Education of Teachers Unrelated to Work Situations

It is unfortunate that the teachers and the teacher educators both tend to get alienated from the mainstream of academic life after a few years of joining their profession. At a time when the knowledge in different disciplines is increasing, they do not keep pace with the new developments in their respective disciplines. The methodology learnt in the teachers' training institutions to transact curriculum is sparingly practised. The teacher, when he joins the school system, finds the education received at the training institutions of little use. The curriculum of the teacher education has to guard itself against obsolescence of knowledge of the teacher educator and the irrelevance of the pedagogy. It is really a serious problem. The content-cum-methodology approach has not solved it because in practice these are being dealt with separately. The pedagogical analysis approach, which aims to integrating methodology with content, needs to be stressed and strengthened. It is, therefore, necessary that the courses of teacher education be made so challenging that the teacher educator remains academically alert and sensitive and the teachers practice whatever has been taught to them in these institutions.

Vagueness in Curriculum

The curriculum of teacher education does not adequately distinguish among the terms like "elective", "optional" and "specialization" resulting into different treatment of subjects in respect of their nature and scope. Likewise, community work, community development, community experience have been vaguely understood, differently interpreted and poorly operationalised. The way SUPW has been conceived and the way it is being practised, the two are at variance. The curriculum of teacher education in practice, at present does not demand rigorous work from trainees and does not develop professionalism.

Universalisation of Elementary Education

The universalisation of education at the elementary level is going to raise another problem. The country will need many more elementary school teachers than at present, beyond the present capacity of training institutions. While alternative training programmes/strategies may be thought of as a short term measure for the training of voluntary teachers, the preparation of additional trained teachers must remain the responsibility of teacher training institutions.

Apart from the obvious demand for a quantum jump in the number of trained teachers, UEE calls for transformation in the role of a teacher. The prevailing role of teacher being confined to teaching the children who already have access to schooling may not be adequate anymore. The future teacher would have to be actively engaged in the task of de-formalising as well as reconstructing both the school and the learn-

ing process in consonance with the changing social reality. The teacher would also be enabling the school to enlarge its capacity to reach out to all the children in a concerned locality. For these purposes, the teacher would have to be empowered in new conceptual, pedagogic and socio-cultural dimensions. The Teacher Education curriculum, therefore, has to be re-organised both structurally and pedagogically. The possibility of each teacher Education institution evolving a field laboratory (say a block, an urban locality or a school cluster) for UEE and linking its academic programme pedagogically with the field projects undertaken by student-teachers, needs to be worked out, rather systematically. This would help lay the foundation of the triangular relationship among the community, school and the Teacher Education curriculum in a symbiotic/dialectic framework.

Facing the Challenges of Science and Technology

The teaching community has to face the challenges thrown by science and technology. There has been an explosion not only of scientific and technological knowledge but also in the means and techniques of acquiring knowledge. The theories of heredity, learning, mental health, attention and motivation should be given a fresh look in the light of the scientific researches.

Manpower Planning in Teacher Education

The absence of manpower planning in teacher education and lack of proper coordination between planning and human resource development have been a matter of serious concern. In certain parts of the country the

trained teachers have to wait for several years to get employment and by the time they are employed, the training effects are practically lost. Yet there are certain other sectors where there is acute scarcity of trained teachers.

Mismatch Between the Training and Nature of Work in Teaching

Another area of concern is a mis-match between the training and the nature of work in teaching. As for instance, the B.Ed. trained teachers (exclusively trained for secondary classes) are seen employed in the pre-primary and primary schools. In addition to stage specific training programmes, it may be thought of to introduce specialised training for pre-primary and elementary school teachers in the B.Ed. programme.

Education as a Life-Long Process and Need for In-service Education

A learning society visualises education as a life-long process. This is equally applicable to teacher education. The current policy stipulation on inseparability of the pre-service and in-service education of teachers needs to be given pragmatic shape at the implementation stage. The curriculum of pre-service and in-service teacher education could be redesigned to maintain the continuity between the two.

Institutional Autonomy

Academic freedom and institutional autonomy are not the legal and constitutional rights. However, these are ethical and moral concepts, nonetheless. The teacher is expected to earn the academic freedom by his/her work. No external authority can

grant it. Freedom and accountability go together. They are mutually supporting and the programme of teacher education has to make a realistic note of this situation.

Teaching as a Profession

Globally, teaching is now being recognised as a profession. But the education of teachers in our context has yet to develop the main attributes of a profession, such as, the systematic theory, authority, community sanction, ethical code and culture, generating knowledge through research and specialisation. Some people do believe that formal training is not necessary for becoming a good teacher as it does not necessarily cater to the development of one's personality and sharpening of communication skills and commitment to a code of conduct. It is for consideration as to what steps need to be taken in respect of training programmes, duration of the course, student teaching/internship etc, so as to develop professional ethics among teachers.

Towards Evolving a Culture-Sensitive Pedagogy

India and many other countries of South-East Asia have a very rich cultural heritage, and are largely multicultural and pluralistic societies. Every region and state has its typical cultural identity, and there is a need to exploit this cultural identity as a basis for developing meaningful, relevant pedagogies. Since there is no one universal way in which the children learn, there is a strong need for looking into the cultural context in which a child is placed. For instance, a child in a tribal society may process information in an altogether different manner as compared to the chil-

dren from the urban area and high socio-economic stratum. Our pedagogy should be based in the tribal culture as well as in the culture of the urban society. It is in this context that special mention may be made of some cultural practices such as story-telling, dramatics and aesthetics which should become a strong basis of our pedagogy rather than one uniform, mechanistic way of student learning. In sum, the cultural plurality should get embedded in the pedagogical practices.

Research and Innovations

One of the major inputs towards enhancing the quality of teaching and learning in schools as well as the teacher training institutions would be the extent to which research outputs and the outcomes of innovations are utilized by the system. An obvious prerequisite would be an indigenous system of researches in teacher education institutions working at different levels. No doubt, researches on teacher education have been and are being conducted in universities, national level institutions and other establishments, their utility for the teacher educator or the classroom teacher remains rather low. The situation is compounded by non-availability of appropriate dissemination mechanisms, like journals, publication of findings in different forms and opportunities to the target group to get an access to these. This is one important factor which has dissipated the research efforts to a great extent. Majority of the researches are undertaken to obtain a degree and hence the focus on its possible utility and relevance gets misplaced.

There is a definite require-

ment of bringing in research methods and methodologies in appropriate form in teacher education at pre-service and in-service programmes. To an extent, it finds a place in master level courses like M.Ed. and M.A., though in certain universities the course requirement on research is not insisted upon. The structure and design of future courses and programmes need to take this aspect into account. Preparation of teacher educators can no longer be completed without adequate grounding in various aspects of research. Researches must respond to policy issues, curriculum issues, evaluative procedures and practices, training strategies, classroom practices etc. The areas of teacher preparation for special education of gifted children and children from groups with specific cultural, social and economic needs can no longer be ignored. Surveys and studies also need to be encouraged. These may be exploratory or diagnostic in nature. The new initiatives and innovations need to be encouraged and studied. Wherever considered appropriate, these could be brought into the system of teacher education for wider and gainful use.

The concept of field interaction and lab area approach in the context of establishment of DIETs is indeed timely. Researches, innovations and surveys must become an integral part of the training programmes of teacher training institutions irrespective of the stages for which it prepares its teachers. The trainees need to be familiarised with innovations in general and innovative practices in teacher education in particular. The prospective teachers need to internalise an element of motivation and self-assurance so that

in schools they could also innovate, experiment and achieve results.

Need for a Fresh Look

The curriculum of teacher education is under constant criticism. The changes in the school and social system occur earlier and the teacher education follows them later so an educational lag between the two continues. The curriculum of teacher education, therefore, does not meet the expectations either of the school or of the society.

The curriculum of teacher education of 1978 was the outcome of pooled wisdom and expertise of eminent educationists whose efforts produced this useful document. But this curriculum needs another look in the light of the N.P.E., its revised version, and new thrusts posed by the political and economic decisions taken at the level of the State. Its reconsideration has, therefore, become necessary.

Gaps Identified

According to the National Policy on Education, 1986, a curriculum of teacher education, which is cut off from the school system and society, serves no useful purpose because of its internal weaknesses, which in the main are the following :

- Teacher education has not been conceived as an integral part of the educational and social system.
- It is conventional, by and large, in its nature and purpose.
- It does not adequately meet the requirement of the school system.

- It does not meaningfully reflect the national values and goals.
- It is heavily loaded with disconnected informations rendering it difficult to be transformed into knowledge or theories.
- It lacks appropriate blend of theory and practical components.
- The result of the latest researches which have significant bearing upon the theory and practice of education do not find adequate place in it.
- It fails to develop the competencies/skills for becoming an effective teacher.
- The latest educational developments are not sufficiently reflected.
- It is terminal in the sense that it does not lay emphasis on continuous and life-long learning.
- It does not lay emphasis on in-service training.
- It does not inculcate professional values.
- It does not lead to integration of physical education with education which needs to be given priority as recommended by the Committee on Physical Education set up by the CABE in 1993.

Critical Concerns

The factors and forces influencing teacher education are many, some of which have been mentioned in the preceding sections, certain others are being enumerated hereunder :

- In case the eligibility qualifications for entry into teacher training institutions are lowered, more academic and professional components will have to be added to the curriculum.
- In case the duration of the programme is increased, the training inputs including the contents will also need enrichment.
- The quantum of knowledge, methods for its transaction and the nature of the theoretical and practical components has to be stage-specific.
- The expectations about the role performance from the teacher influence the teacher education plans and programmes.
- The teacher training plans and programmes will have flexibility in accordance with the availability of resources.
- The education of teacher educators has been, by and large, a neglected sector, which needs careful planning and orientation.

In this discussion document no attempt has been made to propose specific curriculum patterns with the intention that a variety of patterns would emerge as an outcome of discussions. Let us rise to the occasion unitedly and help in transforming the programme of teacher education for greater empowerment of the younger generation.

UCMS Silver Jubilee

The Union Health Minister, Mr. Salim Shervani, said that most of the major health problems confronting the nation could be effectively averted by timely health promotion and preventive activities. "But there is a deplorable tendency to focus solely on curative care to the exclusion of the much-needed prevention and health promotion," he said while addressing a function organised to mark the silver jubilee celebrations of University College of Medical Sciences in New Delhi recently.

Stressing on developing the ability to communicate health messages and advise the population effectively, the Union Health Minister observed that "with changing lifestyles, drug abuse and addiction to alcohol and tobacco and the emergence of HIV infection and AIDS, there is an imperative need of people who will advocate prevention while it is still possible."

He appealed to all senior professors of medical colleges in the country to look at the present day issues and health problems while grooming the new generation of doctors and health professionals. Young doctors, he said, were more attracted by the glamour of specialities and super-specialities in tertiary hospitals. "In this quest, the medical career structure tends to create water-tight compartments and leads to a tunnel vision," he said.

"Finding a proper balance between the needs of medical education, provision of health care and a satisfactory upward career

mobility for health professionals needs constant review and adjustment," Mr. Shervani added.

The responsibilities of the doctor had not only undergone many changes but also expanded considerably, Mr. Shervani said. Care should be taken at the same time to ensure that new advances did not in any way reduce that element of humanism in medicine, he added.

"Medical treatment was far less complex 25 years ago when institutions like the UCMS were set up. The types of illness were different and the hospitals far smaller. Today, as we stand on the threshold of a new millennium, the health professional has no doubt acquired a greater technical ability and greater knowledge which should be used to optimum benefit of the population and its health," Mr. Shervani asserted.

Congratulating the graduates and the postgraduates who received the degrees and diplomas, Mr. Shervani said, "graduation is only the beginning and not the end of medical education. More than anything else, one requires self-motivation in full measure, zeal to acquire new knowledge and application in practical terms," he appealed.

Committee to Review Vocationalisation

The Tamil Nadu State Council for Higher Education (TANSCHE) is reported to have appointed a committee to review the vocationalisation of higher education. Headed by Prof. K. Aludiapillai, Vice Chancellor,

Madurai Kamaraj University, the committee will explore the possibility of transforming at least one arts and science college in each District into a community college that will offer arts and science degree programmes along with career-oriented courses.

The panel will examine the feasibility of linking such colleges with polytechnics and professional education institutions in the area, identify specific courses that could be encouraged in each college depending on the economic potential and natural resources of the region and the nature of such courses; suggest organisational, management and financial structure needed to run career-oriented courses and their economic feasibility; and specify the steps required to retain teachers in colleges where such programmes are to be introduced.

The Council approved a proposal to start M.S. by research for Engineering college teachers in different disciplines. The programme will have course work for one regular semester or two summer semesters with one year of research project which can be undertaken by the engineering college teachers in the respective colleges under the guidance of a professor from the college or university offering the courses.

The M.S. by research degree will be equivalent to an M.E. or M.Tech. degree on the model of such a programme currently offered at Anna University and IIT, Chennai. The programme will be conducted by well-established institutions in the State with high reputation for running the master's degree programme in different disciplines. TANSCHE will take the steps needed to coordi-

nate the quality of the programme.

Madras-Valencia Varsities Sign MoU

The Madras University is reported to have signed an MoU with the nearly 500-year-old University of Valencia, Spain to facilitate cooperation between the two institutions in academic and research fields.

According to the agreement, the two universities will exchange publications and information on courses, seminars and other academic activities, and welcome faculty and students from the sister institutions without levying fees. The agreement exempts Madras University from any financial obligations, considering its financial position.

The agreement was signed by the Madras University's Vice-Chancellor Prof. P.K. Ponnuswamy and the Rector of the University of Valencia Prof. Dr. Pedro Ruiz Torres.

Founded in 1499, the University of Valencia has 75,000 students in 82 departments and specialised research institutions. It functions in three campuses: one for Natural Sciences, a second with colleges of pharmacy, medicine, philosophy, education, psychology, geography and humanities and a third for Social Sciences departments. It offers both five-year degree and three-year diploma courses, mostly in the area of social sciences, nursing and physiotherapy. Prof. Antonio Clement Carrion, formerly Director General of four universities in Valencia, said the University was in the forefront of research and teaching, particularly strong in nuclear physics and Psychology studies.

Over the years, it had strengthened links with academic institutions in Latin America, the Mediterranean and Catalan speaking regions, in addition to collaborative agreements with European and American Universities and research bodies. At present, the University had nearly 50 exchange programmes, mostly with universities in the Latin American region. The University reserved nearly one per cent of its huge financial outlay for exchange programmes.

He pointed out that in the European Union many universities had large amounts reserved for exchange programme grants, but unfortunately not many were aware of the programmes and the funds remained unutilised.

Campus of Technological Excellence

Hindustan Computers Limited (HCL) and the Karnataka government are reported to have signed a memorandum of understanding (MoU) to set up a campus of technological excellence in Bangalore.

Karnataka and HCL Corporation will together work towards furthering India's potential in IT in the international marketplace as well as increasing economic development of the state.

The proposed technology campus will house manufacturing plants, software development centres, R & D centres, training and education infrastructure and residential facilities in an integrated complex. Specialised centres of excellence will be set up for the global software and services market.

In addition, the campus will house the manufacturing facilities for HCL General Instrument

Ltd. (HCL GL), to produce broadband communications equipment for India and the SAARC region.

Signing the agreement, Mr Shiv Nadar, Chairman, HCL Corporation, said, "there is worldwide recognition of Indian software capabilities. By creating this campus of technological excellence we will establish the infrastructure, ambience and competencies for Indian minds to upscale addressal of emerging global opportunities."

The Karnataka government will provide 50 acres of land, expedite provision of utilities and facilities in the campus, and set up single window clearance for all approvals involved in the setting up of the complex. The campus will be equipped with the best telecom and IT infrastructure.

Advances in Aphidological Research

The Aphids Society of India recently organised a National Symposium on "Recent Advances In Aphidological Research" at the University of Gorakhpur. Inaugurating the symposium Prof. R.K. Misra, Vice Chancellor, Gorakhpur University, said that scientists could not conquer the nature but could only use the natural laws for the well-being of human kind. He reminded the scientists that they were creations of nature, not the rulers. Scientists should study and analyse the mysteries of nature to secure the improvement in the quality of man's life. They should desist from tampering with the laws of nature, for that may not be in the interest of man. He also cautioned the scientists to minimize the use of chemical pesticides and fertilizers which were causing 'havoc' in the atmosphere.

Prof. D.R.C. Bakhetia of Punjab Agricultural University, in his keynote address, dwelt at length on the aphids and their management. He said that biological control was essential for sustainable agricultural development. He stressed the use of integrated pest management to minimise the role of toxic chemical pesticides. Pest management should be eco-friendly to check environmental degradation, he said and added that aphids were phytophagous insects having high potentiality of rapid evolutionary change. Their population needed to be regulated by entomologists, he opined.

Refresher Course in Bank Management

The Department of Bank Management, Alagappa University recently organised the first Refresher Course in Bank Management. Sponsored by the University Grants Commission, the course was inaugurated by the Minister for Revenue, Government of Tamil Nadu, Mr. Nanjil K. Manoharan.

The course held 100 sessions in the following thrust areas of banking, Rural Banking, Monetary Management, Cooperative Banking, Development Banking, Merchant Banking, Mutual Fund Management, Foreign Exchange, Project Finance, Bank Marketing, Portfolio Management, Lease Financing, Credit Cards and Factoring. Apart from banking, few sessions were earmarked for computer knowledge, teaching methodology, educational technology, health education and sociology for comprehensive coverage.

As a part of the Refresher Course, a seminar was also organised on Problems of Bank

Depositors and Customer Service wherein participants of the Refresher Course, faculty members, researchers in Bank Management, and bank executives interacted on issues concerning customer service.

Mr. M. Meenakshi Sundaram, Regional Manager of the Union Bank of India, in his valedictory address, appreciated the role of the Department of Bank Management as a link between customers and bankers and eventually between the university and the banking industry.

Bharathidasan Varsity to Conduct SLET

The Bharathidasan University, Tiruchirappalli, has been nominated as Nodal Agency by the Govt. of Tamil Nadu, on the approval of the University Grants Commission, for conducting State Level Educational Testing (SLET) for Lecturership in Colleges/Universities in Tamil Nadu and other States, on reciprocal basis.

The pattern of SLET will be similar to UGC/CSIR NET examinations. The test will be conducted for 39 subjects during the second week of March, 1997 at a few selected Centres in Tamil Nadu.

Candidates who had secured atleast 55% marks in Master's Degree or equivalent from a recognised University are eligible to appear in the test. The candidates who are now in final year and due to take their final examinations during April '97 are also eligible to appear in the SLET, subject to their earning the prescribed minimum marks for eligibility subsequently.

Jamnalal Bajaj Awards

Mr. Manubhai Pancholi, Dr. S.S. Kalbag and Dr Indumati Parikh were recently presented with the Jamnalal Bajaj Founda-

tion Awards. The recipient of the International Award for Promoting Gandhian Values outside India was Prof. Adolfo de Obieta of Buenos Aires, Argentina.

Mr. Pancholi, the recipient of the 1996 award for constructive work is an 82-year old Gujarat-based educationist and constructive worker. Following his release from prison in 1934, he spent his time spreading education at the elementary, secondary and higher level. It was Mr. Pancholi, who introduced agriculture and other allied occupations in "Nai Talim".

He established the Loka Bharati Gram Vidyalaya, which symbolised the coordination of education, research and extension. Mr. Pancholi also has to his credit the introduction of new variety of wheat, named Lok-1. He is also famous for developing the village adoption projects in 1975. This resulted in the training of 7,200 marginal and small farmers in related activities. The project is unique in that after a period of four years it is handed over to the local village community thus developing a permanent nucleus of rural managers.

The award for outstanding contribution in the application of Science and Technology for Rural Development was presented to Dr. Kalbag.

Dr. Kalbag (68) has been working for radical structural reform in the educational system, providing both formal and informal training. His system integrates education and rural development through the process of learning and using it through skilled practice for providing community services. The greatest merit of Kalbag's experiments and innovativeness is their acceptability to the rural people.

The award for upliftment and welfare of women and children was received by Dr. Indumati Parikh, a medical practitioner and freedom fighter, who has been deeply involved in the radical humanist movement.

Dr. Parikh has been practicing family planning counselling in her own dispensary over a span of 42 years and was responsible for pioneering the use of IUD as an OPD procedure in a small clinic in a simplified manner.

She was the founder of Streehitakarini, located in the midst of the socio-economically deprived areas of Mumbai, an organisation which concentrates in providing medical relief and help to the downtrodden destitute women and children.

The recipient of the International Award for Promoting Gandhian Values, Prof. Obieta, is a 82-year old lawyer, doctor of law, philosopher and eminent literary personality. He has several works of literature on peace disarmament, international understanding, international law and non-violence to his credit.

Both in personal as well as in public life, Prof. Obieta represents the quintessence of the Gandhian spirit and ideology. He has been able to gain recognition and appreciation of Gandhian values in Argentina and has earned himself the title of Argentinian Gandhi.

Post-Doctoral Fellowships in Astronomy and Astrophysics

The Inter-University Centre for Astronomy and Astrophysics (IUCAA), invites applications for post-doctoral fellowships in astronomy and astrophysics (A&A). The duration of the fellowship is

flexible within a range of one to five years, with the possibility of conversion to a tenured position. IUCAA offers challenging opportunities to young research workers in theory, observation and instrumentation in A & A and will be especially looking for observers and experimentalists. Research areas covered include: Cosmology and large scale structure, Galactic and extra galactic astronomy, High energy astrophysics, Galaxy dynamics, Quantum cosmology and quantum gravity, General relativity, Gravitational waves, Observational astronomy, and Astronomical instrumentation.

Further details may be obtained from: The Coordinator, Core Programmes, Inter-University Centre for Astronomy and Astrophysics, Post Bag 4, Ganeshkhind, Pune - 411 007, India.

Marketing Library Services

A Management Development Programme (MDP) on Marketing of Library & Information Projects & Services (MLIPS) was conducted by the Indian Institute of Management, Lucknow (IIML) during October 23-25, 1996. 14 senior level Library and Information Managers (LIMs) from all over the country attended the programme.

The training package developed by Dr. Roshan Raina (Librarian, IIML) and Prof. Prem C. Purwar (Faculty Member, IIML), Programme Directors, included discussion sessions on : Conceptual Framework of Marketing; Marketing Mix; Marketing in Library & Information Context; Marketing Cases in the Service Sector; and Organizational Preparedness, with eminent subject experts, experience sharing and

video films on the programme theme. Learning through cases was a unique feature of the programme package.

Participants provided the feedback on the programme, with the help of a structured questionnaire designed for the purpose as well as through a report presented in the valedictory function.

Gulbarga Varsity Refresher Courses

Gulbarga University, Gulbarga, proposes to organise UGC sponsored Refresher Courses for university and college teachers as per details below :

Botany, Zoology : 20.01.1997 to 12.02.1997; Physics, Chemistry, Mathematics : 27.01.1997 to 19.02.1997.

Further details can be obtained from the Director, College Development Council (Staff Development Cell), Gulbarga University, Gulbarga-585 106, Karnataka State.

Detecting Food Adulterants

The Council for Fair Business Practices (CFBP), SNTD Testing Centre, set up on the SNTD Women's University campus at Juhu has devised a home kit to detect food adulteration which the consumer can buy for as little as Rs 250.

"This kit enables the housewife to easily check for herself the purity of often used ingredients at home," says A.V. Patankar, Honorary Director of CFBP laboratory. "For example, mustard or groundnut oil is often adulterated with pungam oil. To check this, a person can add two drops of oil to a solution that is part of the kit. If it turns canary yellow or orangish, it indicates the presence

of the adulterant."

"Similarly, chilli powder is often adulterated with sawdust and colour," he says, adding, "if one adds a liberal dash of it to a glass of water, the sawdust will float and the added colour will colour the water. Or, when a sam-

ple of coffee adulterated with chicory is mixed in a mug of cold water, the coffee will float while the chicory will sink, staining the water brown."

All this information is contained in a booklet that comes along with the kit.

News from Agricultural Universities

GATT and Haryana Agriculture

The General Agreement on Trade and Tariff (GATT) would benefit the Indian farmers in a big way by providing better market facilities and good price to their produce", was the general consensus at the seminar on impact of GATT(WATO) on Haryana Agriculture that concluded recently at the Chaudhary Charan Singh Haryana Agricultural University (CCSHAU). It was observed that the state governments creating export infrastructural facilities would have to encourage farmers by giving them premium for good quality agri-produce.

The need to educate the students as well as farmers about Gatt Accord was strogly felt, for which exstablishment of a core group of scientists who might educate them had been suggested. The farmers should be educated especially about export oriented agriculture, quality requirements in global market and tariff and non-tariff barriers in agri-trade.

For Haryana, it had been proposed that the state government after identifying the commodities and production zones should establish fruits, vegetables and food pprocessing industries in the state. Special sfforts were needed to promote export of du-

rum wheat, basmati and non-basmati rice, onion, potato, cotton, barley malt and flowers for which the state had vast potential. These commodities should be grown in specific suitable zones.

Declaration of minimum support price of all the export oriented crops before sowing season and creation of a high power cell in the Ministry of Agriculture to monitor and promote agricultural export were the other recommendations of the seminar.

Dr. Mangla Rai, ADG Policy and Perspective Planning, ICAR, Dr. J.B. Chowdhury, Vice-Chancellor, CCSHAU, Dr. S. Nagarajan, Project Director, Directorate of wheat Research and Dr. R.K. Singh, Representative of International Rice Research Institute, Philippines, were among the 75 participants who attended the seminar.

Dr. J.B. Chowdhury emphasised on better quality of research to sustain GATT era. Dr. B.S. Dhillon, ex-Dean, PGS, PAU urged the scientists for diversification in agriculture towards horticulture as the fruits demand in global market would increase in near future particularly for grapes, apples, guava. Dr. R.K. Singh emphasised to preserve

scented and other good quality rice varieties previously grown in Dehradun, Eastern Uttar Pradesh, etc and their good character be transferred to new high yielding varieties in order to fetch more foreign exchange through rice export. Dr. Mangla Rai said that the higher agri-production be properly channelised to global market otherwise the successful efforts might be siphoned off to the unproductive channels.

Farm Museum

The University of Agricultural Sciences (UAS) Hebbal, Bangalore, proposes to set up a state-of-art agriculture museum in Gandhi Krishi Vignana Kendra (GKVK) campus. According to UAS Vice-Chancellor Dr. G. K. Veeresh, the museum would come up in the old campus on an area of 10 acres.

It would help farmers know the ongoing research activities in the field of agriculture. About 1,200 species of plants would be exhibited, he added.

Chinese Delegation Visits HAU

A 9-member Chinese delegation led by Mr. Y.R. Renjian, Director-General (Agriculture), China recently visited the Chaudhary Charan Singh Haryana Agricultural University (CCSHAU). The 2-day visit was for developing collaborative programme in crop and livestock production under Indo-Chinese bilateral agreement for cooperation in Agriculture. Welcoming the delegation Prof. J.B. Chowdhury, Vice-Chancellor, said, "The commonality of civilisation, population growth and rural problems between India and China will open newer frontiers for strong cooperation

between the two countries".

The members of the visiting delegation were taken round the constituent colleges, research farm and laboratories of the university and had mutual discussions with the experts of agriculture and animal sciences. The delegation also visited Central Institute for Research on Buffaloes (CIRB) and some of the villages

adopted by the CCSHAU for their overall development.

In a meeting with the Vice-Chancellor and all senior faculty members of the university, the team leader Mr. Y.R. Renjian said that the tissue culture technology developed by the CCSHAU would be of great help in the Chinese agricultural development programme.

News from UGC

Countrywide Classroom Programme

Between 1st and 7th December, 1996 the following schedule of telecast on higher education through INSAT-ID under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 6.00 a.m. to 7.00 a.m. and 1.00 p.m. to 2.00 p.m. The programme is available on the TV Network throughout the country.

1st Transmission

6.00 a.m. to 7.00 a.m

1.12.96

"A Ikebana"

"How to Face an Interview-I"

"Amudha : The Iron Woman of India"

3.12.96

"A Voyage into Matter"

"Archaic Scripts of the World"

"Desert Wild Life : Elegant Antelope Nilgai"

5.12.96

"The Dimensions of Technology (Lecture by Dr. Abdul Kalam)"

"Visit a Mineral Spring"

"Texture of Literature - I : Semiotics"

7.12.96

"Debate on Economic Reforms : Policy Challenges Ahead - I"

"Why Conserve Wild Animals"

"On Line : Living an Information Age"

2nd Transmission

1.00 p.m. to 2.00 p.m.

1.12.96

No Telecast

2.12.96

"Classic Mechanics-I : Galileo's Principle of Relativity - A"

"Effects of Globalisation"

"Sugar Science - I : Micropropagation in Sugar"

3.12.96

"Black Diamond - Buck

Minister"

"Fullerene Learning Through Games"

"Reconstructive Surgery"

4.12.96

"Energy from Natural Resources"

"Design - II : Today"

"The Colourful World of Minerals"

5.12.96

"Burning Bright : Sun, A Viable Energy Option"

"Deccan Traps - Archives of Ancient Volcanism"

"Pronouncing English"

6.12.96

"Beyond Vision (Optical Telescope)"

"Women in Profession : Architecture"

"Soil and Water Conservation for Prosperity to Posterity - I"

7.12.96

"The Story of Indian Painting-VI : Folk Painting"

"Family Series : Ordinary People - II (Poland)"

Hindi Telecast

प्रातः 6.00 से 6.30 बजे तक

2.12.96

"कुदरती खेती प्रकृति से संवाद"
"सामूहिक विवाह"

4.12.96

"साहित्य शिल्पी : नरेश मेहता"

6.12.96

"सृजनहार"

News from Abroad

TWNSO Prizes in Applied Sciences

The Third World Network of Scientific Organisations (TWNSO) invites nominations for its annual prizes in applied sciences. The prizes are intended to encour-

age and support scientific research on major Third World problems in the fields of agriculture and technology.

The TWNSO prizes recognize

and honour distinguished individuals or institutions whose scientific and technical innovations in the fields of agriculture or technology have provided significant and sustainable solutions to some important economic and social problems in the Third World and have brought, or will bring, substantial benefit to the well-being of people.

Two awards are given each year in the fields of agriculture and technology. Each prize consists of a cash award of US\$ 10,000 and a personalised plaque mentioning the recipient's major contributions.

The TWNSO prizes are open to institutions and living individuals — from both developing and developed countries — whose scientific and technological innovations have had, or will have, a beneficial effect on the nations of the Third World in the fields of agriculture or technology.

Members of the Third World Academy of Sciences (TWAS) are not eligible for these prizes.

Nominations for the TWNSO prizes are invited from all members of TWNSO and TWAS as well as from science academies, national research councils, universities and research institutions in developing and developed countries.

Nominations should be made on the relevant forms (available from the TWNSO Secretariat) and should clearly state the contributions made in one of the two fields for which the prize would be given. The nomination should be accompanied by a 1-2 page profile of the nominated individual or institution, and a list of significant publications relevant to the award. For nominated individuals a complete list of publications and the biodata of the candidate are required.

Nominations must be submitted in the English language.

Each nomination is valid for three consecutive years.

Nominations are judged by an international committee of distinguished scientists and technologists appointed by the President of the Third World Network of Scientific Organisations.

Completed nominations for the TWNSO prizes must reach the TWNSO Secretariat not later than 1 March each year.

Further enquiries may be addressed to : Ms. Helen Martin, TWNSO Secretariat, c/o International Centre for Theoretical Physics, P.O. Box 586 - Strada Costiera 11, 34100 Trieste - Italy.

TWAS Associate Membership Scheme

The Third World Academy of Sciences (TWAS) has established an Associate Membership Scheme in Physical and Biological Sciences at Centres of Excellence in the South.

The aim of the scheme is to counteract the brain drain, alleviate the problem of isolation of talented scientists in developing countries, and strengthen the research programmes of Centres of Excellence in the South.

Within this scheme, a number of associates (not exceeding ten per Centre) will be selected for each of the Centres from among the most eminent and promising researchers in developing countries working in the fields of interest of each centre. The selection will be highly competitive and the appointment will be made on the basis of merit. Special consideration will be given to scientists from isolated institutions in developing countries.

The appointment will be made for a fixed period of three years, during which time the associate is entitled to visit the Cen-

tre twice for a period of two or three months each time. Subject to the availability of funds, the appointment may be renewed for a further term of three years. During the visit the associate may pursue his/her own research interests and/or collaborate with the research teams at the Centre in programmes of common interest.

The Third World Academy of Sciences, with a grant provided for this scheme by the OPEC Fund for International Development and the United Nations Educational, Scientific and Cultural Organisation (UNESCO) will cover the travel expenses involved, while the host centre will cover the living expenses of the visitors, and provide all the necessary research facilities.

Further details may be obtained from the Academy's Secretariat located at the International Centre for Theoretical Physics (ICTP), Strada Costiera 11- P.O. Box 586-34100 Trieste-Italy.

The Bernard Conyers Award 1997

The Bernard Conyers Award offers individuals in the Third World [or lesser privileged areas of Europe] the opportunity to produce/publish original materials in the field of rural development and or education, that might otherwise remain unpublished or unavailable to those working at field level.

The Committee is anxious to encourage the use of new media, where relevant, for example video, film or other communication systems such as the Internet.

A maximum of £5,000.00 is available for up to four awards in 1997.

For further information, write to The Administrator, The Arkleton Trust, Enstone, Oxon OX7 4HH.



His Holiness
Mahesh Mahesh Yogi
CHANCELLOR

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BOOK REVIEW

A Human Document

Tarlok Singh*

Sushila Nayar, Mahatma Gandhi's Last Imprisonment: The Inside Story. New Delhi, Har-Anand Publications, 1996. Pp. 407, Rs. 495/-.

Sushila Nayar's diary of the period 9 August 1942 to 6 May 1944 when Gandhiji was incarcerated at the Aga Khan Palace in Poona is a document of unique historical value for the study of India's struggle for freedom. Mahadev Desai, who was also arrested with Gandhiji after the passing of the Quit India Resolution on 8 August 1942 and was with Gandhiji at the Aga Khan Palace had already begun to keep notes of day to day happenings, as was his practice, but on 15 August he suddenly felt giddy, fainted, had a convulsion, turned pale, his eyes closed, never to open again.

Mahadev Desai gone, the following day Gandhiji asked Sushila Nayar to keep a daily diary so that there was an authentic record of life in prison during the 'last Satyagraha struggle for freedom'. Sushila had already anticipated this need and showed Gandhiji what she had written after Mahadev's last entry. Thus started her prison diary which Gandhiji unfailingly reviewed and corrected from time to time.

Appalled at the vicious pro-

* Editor, *IASSI Quarterly*, Indian Association of Social Science Institutions, Care Institute of Applied Manpower Research, Indraprastha Estate, New Delhi -110 002.

paganda that had been unleashed after his arrest, one of Gandhiji's first acts was to write to the Viceroy. In this letter he insisted that the Congress had not approached the movement with any but the friendliest motives. The Congress had sought to kill imperialism as much for the sake of the British people and humanity as for India. The Congress had no interests of its own apart from those of the whole of India and the World. However much he disliked the action of the Government, he remained the same friend as before and would still plead for a reconsideration of the Government of India's whole policy.

On the personal plane, after Mahadev's death, Gandhiji remarked, 'God is putting me to a severe test. If I cannot keep my balance in the midst of misfortunes, how can I do justice to the work before me?' Gandhiji concentrated on his studies and went on with his work.

The detention camp thus became a place of work and prayer, all the members renewing their strength from within from day to day. There was so much to do, and no time to waste. 'Our every breath', Gandhiji insisted, 'should be dedicated to the pursuit of our goal', 'Utopia', he said on one occasion, 'will always remain an ideal, there is no need to call it a

myth. The perfect line of Euclid will always remain an ideal. Nobody can draw it. But that does not make it any less real'. To his companions — Kasturba, Pyarelal, Sushila, and Sarojini Naidu, Gandhi said, 'I want you all to become regular in everything. Clockwise regularity will enable you to find time to do everything you want to'.

Many interesting conversations took place during their walks in the Aga Khan Palace grounds between Gandhiji and Pyarelal. Time and again, Pyarelal returned to the question of Russia and what it had achieved. Gandhiji acknowledged the achievement, but 'unless they realize the importance of using, and decide to use the right means, they will never be able to hold out'. Though not at the end of the war, at the end of another period, the fabric eventually broke down. In the course of their conversations, Gandhiji said that Marxist theories could not be compared with the laws of nature and were not true for all time. Unless we accepted non-violence, mankind would continue to face war after war. Civilized society could not be a party to that.

Gandhiji and Pyarelal talked about capitalists and how they might produce wealth, not for themselves, but for the people and about trusteeship as an ultimate goal. Turning to the needs of India's villages, Gandhiji said that the spinning wheel and village industries could not eliminate poverty. He did not yet have the solution, but felt that there had to be equitable distribution of land.

Through the simple acts of

living from day to day, in conversations about small matters, wisdom and a sense of values pervaded the life of the inmates of the Aga Khan Palace, uplifting for them and, not less, for those who come to share their life through this precious diary which Sushila Nayar maintained with such meticulous care under Gandhiji's thoughtful attention to all matters of detail. There were irritations and frustrations from time to time, and these were borne with equanimity, often even with a smile. There were sad moments too and periods of anxiety, as through the prolonged illness and

suffering of Kasturba, ending in her death on 22 February 1944. Earlier, there was a period of trial when Gandhiji went through the ordeal of his 21-day fast from 18 February 1943 to 3 March 1943.

Sushila Nayar's diary is an altogether human document, but it has also its spiritual dimensions and firm intellectual foundations. The reader who reflects on the life and thoughts that filled the air of the Aga Khan Palace during those momentous days will surely make his or her own discoveries through its pages. The diary should be read slowly and not skipped over too fast.

Political Economy of Environment A Grounded Critique

S.P. Punalekar*

Caroline Thomas (ed.). Rio: Unravelling the Consequences. Ilford, Essex: Frank Cass & Co.Ltd., 1994. \$ 29.50.

A great deal of international interest was aroused when the United Nations Conference on Environment and Development (UNCED) was held in Rio in June 1992. It was then felt that issues concerning the sustainability of development alongside protection of human rights and their livelihood sources will dominate the discussion and result into viable policy action. Not much seems to have happened that could materially benefit the poorer segments of the world community; especially the countries in the South. Discussion in the present book vividly portrays the post-Rio process on the canvas of world

economic and political relations, and unravels the worrisome consequences for the present and future generations. The essays also point towards the areas of hope and optimism; if the sensitive and concerned individuals and groups counter the hegemony of the entrenched groups; including the corporate interests of the multinationals.

The book contains 13 essays that focus on both the generic, theoretical issues as well as empirical manifestations of current development practices of political regimes that have dire environmental consequences. Thus, the discussion remains well grounded as a coherent critique of interface between development and environment. Steve Smith's essay explains how the environmental

issues have remained at the periphery of international relations. Julian Saurin further links the problems of global environmental degradation with modernity and environmental knowledge. Devlin and Yap unfold contradictions underlying the structural adjustment programmes and the UNCED agenda. Other essays also add to our understanding of complex relationships among international trade, environmental issues, marketability of sulphur dioxide permits, politics of climate change, freshwater resource crunch, domestic security concerns etc.

Each essay is quite complete in itself in terms of its rationale and analytical rigour; and at the same time, it has organic links with a central problematique on political economy of environment. Caroline Thomas who has edited this volume has succinctly brought out the main elements of this debate in her introductory essay, *Beyond UNCED: An Introduction*. Reflecting the synthesis of positions articulated in other essays, she argues that at the most fundamental level, the causes of environmental degradation have remained unaddressed, leave alone their resolution. She maintains that "...The state, rather than facilitating improvement, is often an abstacle. In many instances it is incapable of tackling the crisis which is rooted in the globalisation under way in the international system. Powerful entrenched political and economic interests, sometimes but not always state-based, impede progress in understanding and addressing the crisis. They marginalise rival interpretations of its origins and thereby block the discovery of possible ways forward..." (p.2, emphasis added).

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Steve Smith also cautions that political reasons are more powerful behind the current environment debate; and feels that these interests and their lobbyists would push real environmental issues into the periphery of international relations. He warns that both environmental issues and those who research them may be marginalised, unless they address the fundamental relationship between knowledge and power. He makes a fervent appeal to step outside their conventional, corporate-friendly theoretical framework and to confront the fundamental structures in which the environmental question is played out.

The essays contribute significantly in the direction of building a theoretical framework which respects the local initiatives and constraints, and also attaches importance to parameters of global economy and politics. It is for these reasons, it advocates the following principles for effective interventions in current crisis situation. Firstly, it places a weightage on efforts to re-articulate international political space. It urges awareness of effects of globalisation on environment. It recognizes that the site of environmental degradation is often removed from the initial agent, and thus 'the relationship between cause and effect may not be obvious, and consequently attributing responsibility is not straightforward'.

Julian Saurin, while identifying the relationship between modernization, knowledge and globalisation in order to reveal modes of knowledge, makes a valuable suggestion worth collective reflection. At the end of his essay, he says, "...Central to the

critique is that global environmental degradation arises out of the *normal and mundane practices of modernity* not from the accidental or abnormal Thus, the structures of modernity not only create mass environmental degradation, but simultaneously mask its origin and formation..." (p. 62, emphasis original). She makes a plea to address this tension before appropriate legislative or regulatory instruments either at the state or global level are instituted.

Devlin and Yap critique the neo-classical market theory and its implicit logic of uneven asset distribution. They argue that the consensus over economic efficiency as a means to environmental ends has been reached too hastily. They unequivocally proclaim that for a sustainable development understood as environmental sustainability, 'relative equality between high-consumption countries and low-consumption countries, moderated levels of poverty in all countries, and political stability in all countries, is not consistent with free trade, unrestrained markets, and inactive states.' (p. 76).

In the last essay, *Environment, Development and Security*, Paikiasothy Saravanamuttu provides an insightful clue on the links between environment and security questions. The essay boldly argues that the conventional wisdom and paradigm is threatened with new, creative alternatives to present ways of thinking. It is scared of being sub-

verted, and hence clinging towards the outmoded ways of safeguarding the existing social and political arrangements, and unresponsive to redefinition of its institutional structures and practices. This scholar reviews thoroughly the anxieties of the developing countries with regard to their own economic growth and impending obstacles due to stringent environmental prescriptions from the North. This essay therefore pleads that "instead of sustainable development, 'replicable development' would be more appropriate. It captures the developmental aspirations of the South and the environmental fears of the North in a manner that is not prejudicial to security." (p. 236).

This book is indeed a valuable contribution to our knowledge and understanding of complex relations between concepts of development, environment and sustainability. The book provides 'other' side of the debate on environment, and lays bare the inner contradictions between the international agenda and local, state-level specificities. It also brings to the fore the strength and limitations of the NGOs in their efforts towards countering the global corporate pressures including those of the IMF, World Bank and WTO. Thus, this book is a must for university teachers and students interested into society-environment dynamics. Also the policy makers in India can get good deal of data and insights on environment debate.

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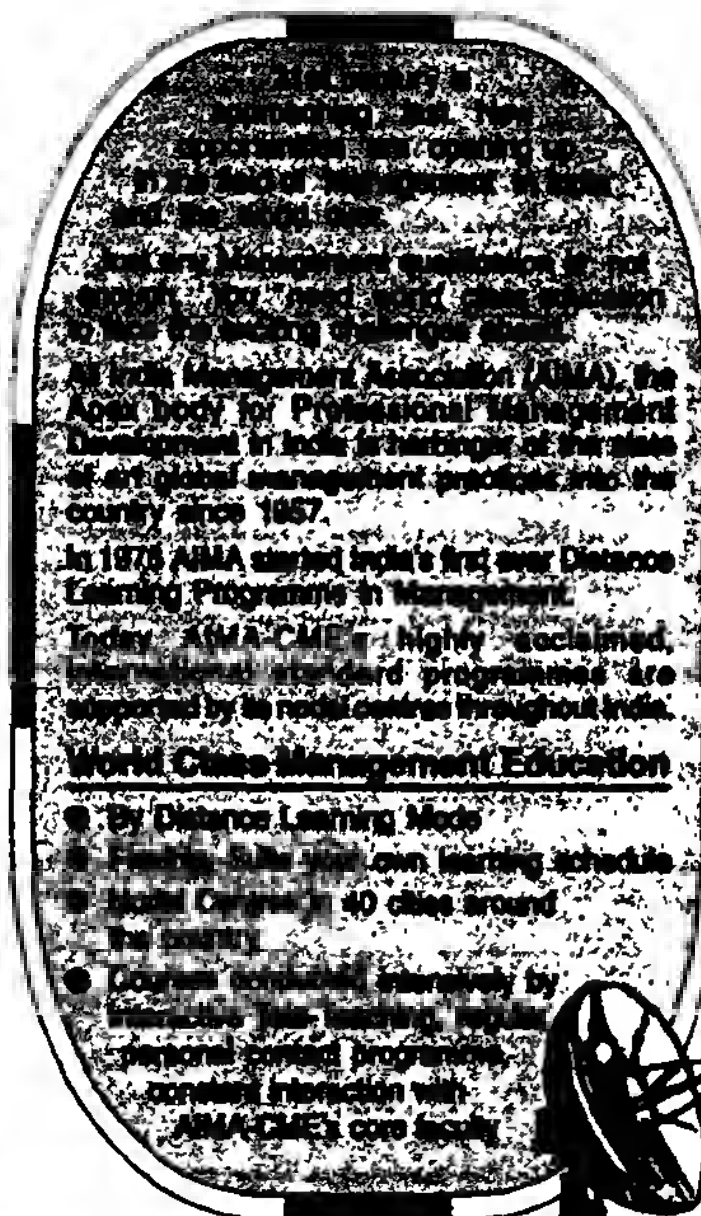
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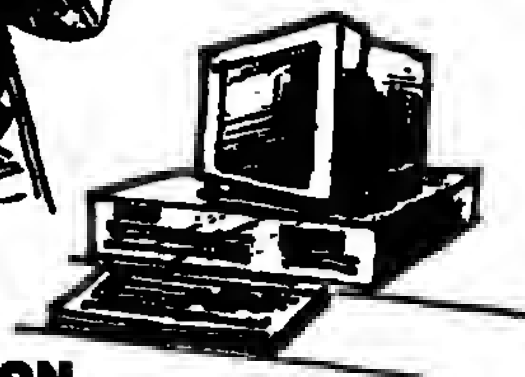
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UNIT 63

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities

SOCIAL SCIENCES

Psychology

1. Rajmal Singh. A study of predictors of rural and urban scholastic achievement. Veer Kunwar,

Sociology

1. Chakravarthy, Radha. Scientists and scientific organisations : A sociological study of organisational climate. Osmania, Prof C Lakshunanna.

2. Das, Tapati. Educated working mother, adjustment between profession and motherhood : A study of working mother in Orissa. Sambalpur, Dr S N Rath, Prof (Retd), Department of Anthropology, Sambalpur University, Jyoti Vihar, Burla.

3. Hota, Abhinna Kumar. Radical youth movements in the United States and India : A comparative study. JNU, Prof R P Kaushik, Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

4. Khemariya, Madhulata. Gramin mahilayon ke arthik kriyayen evam parivarik athiti. Durgavati, Dr (Smt) Saraswati Mishra, Department of Sociology, Rani Durgavati Vishwavidyalaya, Jabalpur.

5. Munjal, Brij Mohan. Social heritage of the Valmiki Ramayana and the Mahabharata. D Litt. Devi Ahilya,

6. Saini, Abhilasha. Chhattisgarh ke Raut Jati : Ek samajhastriya adhyayan. Ghasidas, Dr (Smt) Shachi Sapre, Govt Girls P G College, Bilaspur.

7. Samuel Asir Raj, S. Social displacement and environmental degradation : The case of North Arcot District, Tamil Nadu. JNU, Prof J S Gandhi, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

8. Shafi, Aneesa. Role conflict among working Muslim woman of Srinagar. AMU, Prof Noor Mohammad, Prof and Head, Department of Sociology, Aligarh Muslim University, Aligarh.

9. Singh, Uday Kumar. Water management, community and the ecological setting : A sociological study of Spiti Valley, Himachal Pradesh. JNU, Prof K L Sharma, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

10. Venkata Rao, M. Migration, social mobility and city home community interaction. Andhra,

11. Vyas, Lavleena. Notions of masculinity and femininity and caste identities : A comparative study of Brahmins, Rajputs and Baniyas in the city of Jaipur. JNU, Prof K L Sharma, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

Social Anthropology

1. Rath, Alok. Quaternary environment and prehistoric cultural development : A micro-level study on the East Coast of India. Andhra,

Political Science

1. Challa Hymavathi. Women leaders in political parties : Patterns of recruitment, perceptions and performance in Andhra Pradesh. Hyderabad, Dr P Manikyamba, Reader, Department of Political Science, University of Hyderabad, Hyderabad.

2. Kiran Kanta. The development of political ideas of M N Roy. HP,

3. Mishra, Ranjana. The role of Mahakoshal Region in the Indian National Movement : Special reference to Katni Murwara. Durgavati, Dr K C Jain, Department of Political Science, Hitkarini Mahila College, Jabalpur.

4. Rafath Begum. Secularism in political ideas of Pandit Jawaharlal Nehru. Hyderabad, Dr P C Sarangi, Reader, Department of Political Science, University of Hyderabad, Hyderabad.

5. Saroj. The Non Alignment and the United Nations Organisation. Patna, Dr M N Jha, Head (Retd), Department of Political Science, Patna University, Patna.

6. Shandil, Dhani Ram. Ethnic plurality and politics in North East India : A study of the Bodo Movement. HP,

7. Singh, Jevesh Kumar. Mahabharat mein varnit shaahan vyavastha ka swaroop. Veer Kunwar.

8. Sinha, Jyoti. Mahatma Gandhi tatha Vinoba Bhave ke vicharon ka ek tulnatmak adhyayan. Ghasidas, Dr O N Mishra, Govt New Girls College, Bilaspur.

9. Tiwari, Sanjay Kumar. Sansadiya loktantra mein sabha samitiyon ke bhumika : Madhya Pradesh ke vishesha sandarbh mein. Ghasidas, Dr Umashankar Shukla, D P Vipra College, Bilaspur.

Economics

1. Ahuja, Kanhaiyalal. Tribal marketing in South-West M P. Devi Ahilya, Dr (Smt) T K Vajdi, Prof, Department of Economics, Devi Ahilya Vishwavidyalaya, Indore.

2. Bajpayee, Shashi Kant. Economic thoughts of Karl Marx and Mahatma Gandhi : A critical and comparative study. Vinoba Bhave. Dr Sajal Mukharjee, Department of Economics, Vinoba Bhave University, Hazaribag.

3. Batra, Anju. Economics of crops and live stock enterprises in Solan District of Himachal Pradesh. HP,

4. Bhatnagar, Sunil. Bharat mein parivar niyojan ke chalis varsh : Ek alochnatmak mulyankan, Jila Jhansi ke sandarbh mein. Bundelkhand, Dr Shyam Narayan Lal, Principal (Retd), Govt College, Niwari.

5. Chakraborti, Bikas Kumar. Economic development of the districts of Burdwan and Bankura, 1951-81 : A comparative study. Burdwan, Prof Rajendra Mohan Chakraborti Thakur, Department of Economics, University of Burdwan, Burdwan.

6. Gaur, S P. Economics of mushroom production : A case

study of Sonapat District of Haryana. Jamia, Prof N A Azad, Department of Economics, Jamia Millia Islamia, New Delhi.

7. Gupta, Neena. Sarguja Jile mein tilhan utpadan ka arthik adhyayan : Rai, sarson faslon ke sandarbh mein. Ghasidas, Dr H N Guru, Govt P G College, Ambikapur.

8. Ismail, Jamal Naji Abed. Export trends in a developing economy : A case study of Jordan. Baroda,

9. Joshi, Rashmi Shrikant. Determinants of public expenditure and economic growth in India. Baroda,

10. Laxmaiah, P. Consumption patterns of tribal households : A case study of Chenchus in Mahabubnagar District of Andhra Pradesh. Osmania, Dr M Upender, Department of Economics, Osmania University, Hyderabad.

11. Mane, Ashok Bhausaheb. Retrospects and prospects of exports and imports in Indian agriculture. M P Krishi, Dr S N Tilekar.

12. Pal, Asit Kumar. The industrialisation and excess capacity in the registered manufacturing sector of West Bengal. NBU, Prof M Dasgupta, Department of Economics, University of North Bengal, Raja Rammohunpur, District Darjeeling.

13. Pandey, Suresh Chandra. A study of direct recruitment in Damodar Valley Corporation. Magadh, Dr P N Singh, Prof, Department of Economics, Bhim Rao Ambedkar Bihar University, Muzaffarpur.

14. Rahane, Ramnath Kisan. Marketing of slaughter animals for beef and meat, in Bombay market. M P Krishi, Dr B J Hinge, Prof, Department of Economics, Post Graduate Agricultural Institute, Rahuri.

15. Ramappa, P. Performance of regional rural banks with special reference to the Rayalaseema Region of Andhra Pradesh. Krishnadevaraya, Prof N Narayana, Department of Economics, Sri Krishnadevaraya University College, Anantapur.

16. Utreja, Yamini. A study of farm production patterns in the periphery of Shimla City. HP,

17. Velayutham Saravanan. Economic transformation of tribals in Tamil Nadu since the colonial rule, 1792-1991. Hyderabad, Prof M Atchi Reddy, Department of Economics, University of Hyderabad, Hyderabad.

18. Viswanath, T. Management of traditional irrigation facilities : A study of tank irrigation in Anantapur District of Andhra Pradesh. Krishnadevaraya, Dr G Sreedhar, Department of Rural Development, Sri Krishnadevaraya University College, Anantapur.

Law

1. Vishnu Murthy, M. Role of Company Law Board as an instrument of socio-legal transformation : A critical appraisal. Osmania, Dr Avtar Singh, Reader (Retd), 398, Motinagar, Lucknow.

Public Administration

1. Goel, Simmi. Administration of job satisfaction-mechanism among employees in selected public sector undertakings of Himachal Pradesh. HP,

2. Kashyap, Bipan Lal. Administration of welfare

programmes for scheduled castes in Himachal Pradesh. HP,

3. Leela Kumari, D. An evaluation of the District Scheduled Castes Cooperative Society Limited, Visakhapatnam. Andhra,

Education

1. Arayath, Koroth Geetha. A critical study of the achievements of sainik schools in India with special reference to Southern states. Karnatak, Prof B C Patil (Retd), Vanamala, Rajeshwari Nagar, Ranebennur.

2. Buno Zetsuvi. A study of the gifted elementary school tribal children in Nagaland : Identification and nurture with reference to Kohima District. Nagaland, Dr R P Shukla.

3. Choudhary, Rakhi. Uttar Pradesh ke shikshak prashikshan mahavidyalayon mein shravya-drishtya shiksha yojna ka adhyayan. Bundelkhand. Dr Jawaharlal Verma, Lecturer, Department of Education, Bundelkhand College, Jhansi.

4. Gill, Ravindrajeet Kaur. Effectiveness of problem based social studies curriculum for primary school in terms of content coverage. Devi Ahilya, Dr B K Pasi, Vice Chairperson, National Council of Teacher Education, New Delhi.

5. Gore, Sita Madhav. An investigation into the needs and motivation of gifted adolescent boys and girls with respect to their socio-economic background. Nagpur, Dr K L Pandit, Prof and Head (Retd), Department of Education, Nagpur University, Nagpur.

6. Gupta, Sushma. Work values of teaching and non-teaching professionals in relation to their locus of control. Kurukshetra,

7. Jebamani, Joyce. A study of the status of English as a compulsory subject at higher secondary level. SNDT, Dr S V Joglekar, B-24, Thana Hill Top Society, Tekdi Bungalow, Old Bombay Agra Road, Lal Bahadur Shastri Marg, Thane.

8. Kesarkar, Madhura. Brhmmumbai ratra madhyamik shalancha chikitsak abhyas. SNDT, Dr Vasudha Kamat, Centre of Education, FVDT College of Education for Women, Bombay.

9. Nanda, Ambika Prasad. Universalization of primary education in South Asia with special reference to Bangladesh. JNU, Prof I N Mukherji, Centre for South Central, South-East Asian and South-West Pacific Studies, Jawaharlal Nehru University, New Delhi.

10. Negi, Bir Singh. Literacy campaign in Himachal Pradesh : An evaluative study. HP,

11. Rajendra Pal. Nature and process of academic orientation of teachers of higher education. Devi Ahilya, Dr B K Pasi, Vice Chairperson, National Council of Teacher Education, New Delhi.

12. Santhoshkumar, G R. A comparative study of teacher education programmes at secondary level in South Indian states. Calicut, Dr R Sukumaran Nair, Dean, Faculty of Education & Controller of Examination, Sree Sankaracharya University of Sanskrit, Kalady P O, Ernakulam District.

13. Sarada Devi, M. Understanding science : Science teach-

ers views on scientific rationality and scientific practice. Omania, Dr V Sudhakar, Reader, Department of Education, Omania University, Hyderabad.

14. Supakar, Ramesh Chandra. A critical analysis of the Doctrine of Trusteeship and its implications for environmental education. Devi Ahilya, Dr U C Vaishya, Department of Education, Devi Ahilya Vishwavidyalaya, Indore.

15. Tarkasband, Ujjwala. A critical study of the guidance and counselling practices in secondary schools in Greater Bombay. SNDT, Dr Vasudha Kamat, Centre of Education, PVDI College of Education for Women, Bombay.

16. Venugopala Rao, K. A study of the factors contributing to the teacher morale in secondary schools. Andhra,

17. Vijayakumari, L. Value orientation of secondary school teachers and their attitudes towards educational issues. Omania, Dr P Sandeep, Prof, Department of Education, Omania University, Hyderabad.

Commerce

1. Agrawal, Vinod Kumar. Entrepreneurship development through secondary education : A case study of C B S E Delhi. Manipur, Prof V P Giri, Director, Manipur Institute of Management Studies, Manipur University, Imphal.

2. Chandawarkar, Meena Rajeeva. Human resource development interventions and their effects on productivity at different levels, in an organisation with special reference to Kanoria Industries Ltd. Bangalore. Karnataka, Dr B M Wali Reader (Retd), Department of Commerce, Karnataka University, Dharwad.

3. Halasaqi, Sadaashiv Onkarappa. An appraisal of working of Government Fair Price Shops, PDS in Karnataka State with special reference to Athani Taluka of Belgaum District. Karnataka, Dr K S Daniel, Chairman, Department of Commerce, Karnataka University, Dharwad.

4. Iqbal Ahmad. Rail karmachari evam karya santushti : Dakshin Purva Railway ke Bilaspur Sambhag ka ak adhyayan. Ghasidas, Dr A Ramakrishna, Department of Education, Guru Ghasidas Vishwavidyalaya, Bilaspur.

5. Kulbir Singh. A study of the self employment scheme for educated unemployed youth in the State of Haryana. Dayanand, Rohtak. Dr Narendra Garg.

6. Maiti, Madhab Chandra. A study of dividend policy behaviour in selected large Indian companies in the private sector. Burdwan, Prof Amit Kumar Mallick, Department of Commerce, University of Burdwan, Burdwan.

7. Naik, Janardhan Govindrao. Productivity and cost effectiveness in foundry industry : A study of foundry industry in Belgaum District. Karnataka, Dr A B Kalkundrikar, Lecturer, Gogte College of Commerce, Belgaum.

8. Pandharkar, Vinayak Dattatraya. A study of the organisation and working of the small saving movement in Maharashtra State, 1960-1985. Nagpur, Dr S B Bodhankar, Reader and Head, Department of Commerce, CP & Berar College, Nagpur.

9. Rasotra, Poonam. Customer satisfaction in insurance services : A case study of LIC, Jammu Division. Jammu, Dr R D Sharma, Reader, Department of Commerce, University of Jammu, Jammu.

10. Ray, Swapn Kumar. Present economic conditions of agricultural labourers in some selected districts of West Bengal : An empirical study. Burdwan, Sri Joydev Sarkhel, Department of Commerce, University of Burdwan, Burdwan.

11. Sansar Singh. Materials management in Power Development Department of Jammu Division. Jammu, Dr R D Sharma, Reader, Department of Commerce, University of Jammu, Jammu and Dr N S Gupta.

12. Sharma, Devinder. Role of development banks in industrialization of Himachal Pradesh. HP,

13. Soni, Vinod Kumar. Jabalpur evam Narsinghpur Jile ke krishi upaj mandiyon ke karyon ka tulnatmak adhyayan : Ek arthik vivechan. Durgavati, Dr P C Rawat, Principal, G S College of Commerce and Economics, Jabalpur and Dr M N Khare, 24, Ravindra Nagar, Adhartal, Jabalpur.

14. Tripathi, Sudhir Kumar. Madhya Pradesh ke audyogik ikaiyon mein prabandhkiye lekhan, vyavahar evam mulyankan : Gwalior parikshetra ke pramukh ikaiyon ke vishesh sandarbh mein. Bundelkhand, Dr D C Agrawal, Bundelkhand College, Jhansi.

Home Science

1. Anupma. Quality evaluation and economic feasibility of microwave Vs conventionally cooked chevon. HP Krishi, Dr Manoranjan Kalra, Department of Food Science and Nutrition, College of Home Science, Palampur.

2. Sharma, Santosh Kumari. Occupational health problems : Impact on output and household development of women workers of rural and urban handloom industries of Panipat. Beroha,

Management

1. Atri, Parkaj. A strategic marketing approach for developing tourism potential with special reference to Jhansi Region. Bundelkhand, Dr D C Agrawal, Head, Department of Commerce, Bundelkhand College, Jhansi.

2. Chauhan, Ramkumar. A study of organisational politics orientation as related to certain personal and situational variables among university employees in India. Devi Ahilya, Dr R D Pathak, Department of Management, Devi Ahilya Vishwavidyalaya, Indore.

3. Hanumantha Rao, K. Employment of children in urban informal sector : A study of Visakhapatnam City. Andhra,

4. Parkash. Management of conflicts in selected industrial enterprises of Haryana. Dayanand, Rohtak. Dr Dalip Singh.

5. Patra, Lalit Prakash. Organisation and management of advertising agencies in India. Bundelkhand, Dr R K Saxena, Head, Department of Business Administration, Bundelkhand University, Jhansi

6. Rana, Surekha. A study of the relationship between organisational effectiveness and leadership in the institutions of higher learning. HP,

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CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in the AIU Library during October 1996

EDUCATIONAL PHILOSOPHY

Iheoma, Eugene O. (1996). Autonomy, indoctrination and moral education. *New Frontiers in Edn* 26(2), 117-37.

Peter, K.C. (1996). Knowledge revolution. *New Frontiers in Edn* 26(2), 198-201.

EDUCATIONAL PSYCHOLOGY

Diekhoff, George M and others. (1996). College cheating : Ten years later. *Research in Hr Edn* 37(4), 487-502.

Saltiel, Iris M. (1995). Experiential learning the workplace. *New Directions for Adult and Continuing Edn* 68, 47-54.

Schwartz, Joan and Swinerton, E Nelson. (1995). Awarding college credit for knowledge and ability gained outside the college classroom. *New Directions for Adult and Continuing Edn* 68, 39-46.

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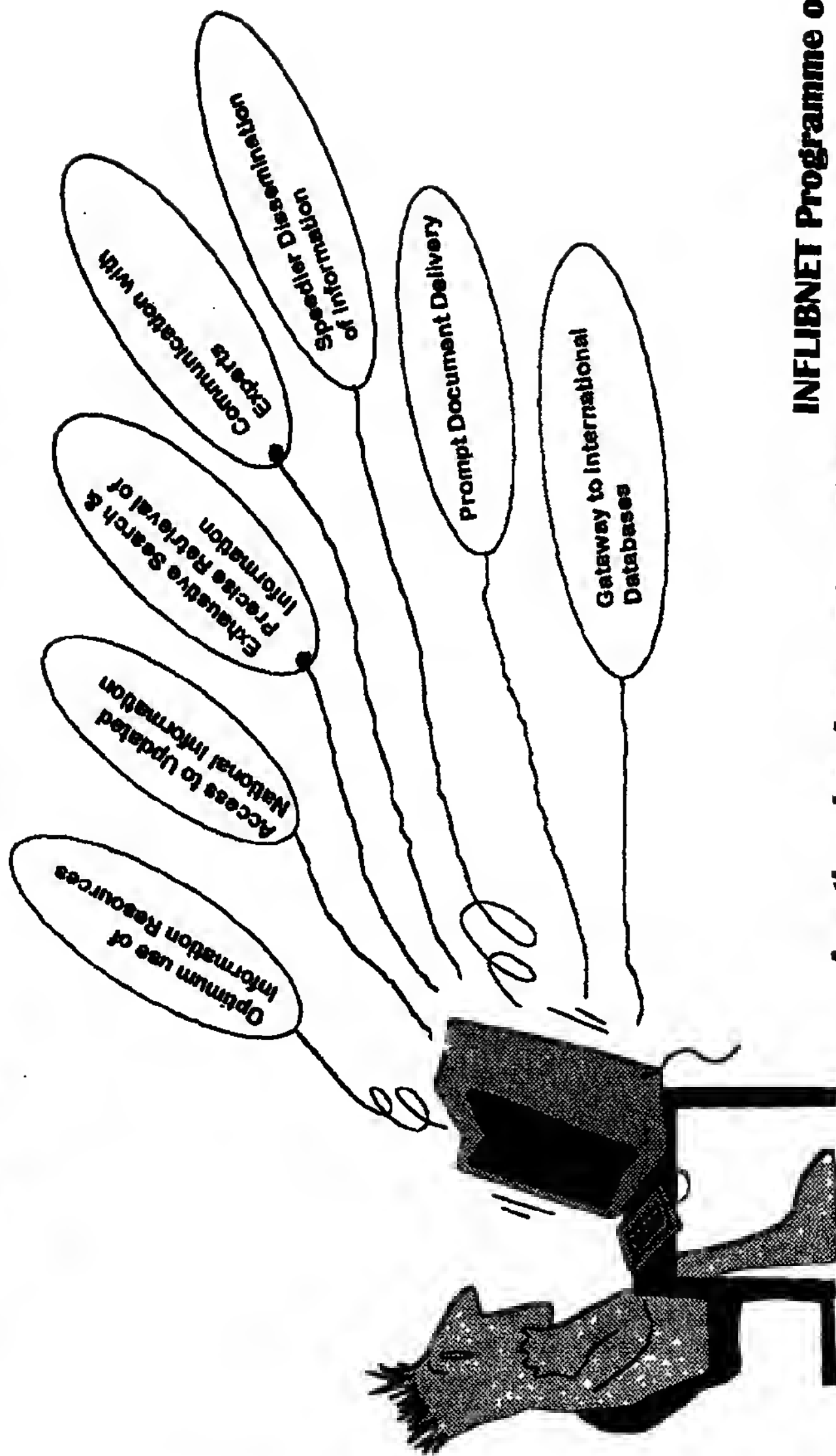
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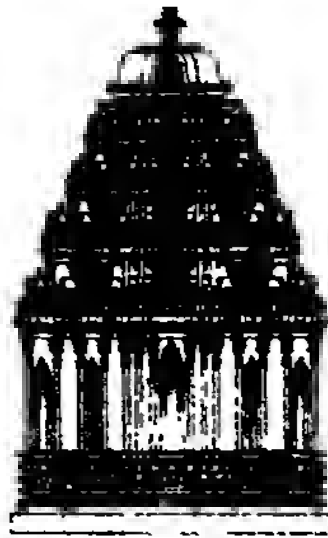
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3. Master's Programme in Landscape Architecture.
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AMRAVATI UNIVERSITY



AMRAVATI-444 602 (MAHARASHTRA)

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The Amravati University started with an inherited tradition of learning, from 67 affiliated colleges, today in 1996-97 session have 178 affiliated colleges excluding one conducted education college and 22 Post Graduate Departments in different subjects viz. Chemical Technology, Bio-Technology, Business Administration and Management, Physics, Chemistry, Micro-Biology, Botany, Applied Electronics, Computer Science with M.C.A., Zoology, Sociology, Home-Science, Marathi, Functional Hindi, Geology, Mathematics, Statistics, Library and Information Science, Law, Physical Education and M.Phil. Courses. Faculty members of the university have won National and International awards and honours in recognition of their outstanding work. During the short span of 13 years University has made phenomenal progress in teaching, research and extension activities.

DR. S.T. DESHMUKH
VICE-CHANCELLOR

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the University



Devi Ahilya University, INDORE

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The University is a State University supported both by the Madhya Pradesh Government and the University Grants Commission. The University has been incorporated in the Commonwealth Year Book. It has been declared Model University by the M.P. Government.

Located in the thriving business and cosmopolitan city of Indore, it is a centre of learning and knowledge, positioned to interact with

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UNIVERSITY OF MUMBAI

Certain News and Activities

1996-97

Established in 1857 consequent to 'Woods Education Despatch', the University of Mumbai is one of the oldest and premier Universities in India with the background of 139 years of glorious existence with numerous milestones of achievements in intellectual and academic endeavours. It has 35 University Departments imparting Post-graduate level degree courses, and 346 Affiliated/Constituent Colleges and Recognised Institutions which include 76 colleges/Institutions imparting various professional courses. During 1996-97 till now, 7 more new colleges have been affiliated to this University.

The University of Mumbai has been one of the first Universities to accept the UGC sponsored various Vocational Courses at the First Year Degree level from 1994-95 and presently 22 colleges affiliated to the University are successfully conducting these courses.

One of the major and noteworthy achievements in 1996-97 is commencement of the Post-graduate diploma course in 'Human Rights' which to the best of our knowledge is the first of its kind in the country at the University level. Through this course, the University of Mumbai has taken the lead in providing in depth study and training in the Theory and Philosophy of 'Human Rights' and Human Values in the Indian and Global context which is one of the accepted needs in terms of its significance and implications in the contemporary era.

This University has held two Workshops in 1996 on 'Productivity improvement and effective performance' for Grade-I officers of the University and on "Inter personal relations in improvement of Administrative co-ordination and effectiveness" for Grade-II and Grade-III non-teaching employees of the University.

Through the activities of the Unit of the extra-mural studies, at the University of Mumbai 11 different courses are successfully conducted in 1996 which include First Aid Training, Home Management, Ornamental Fish Breeding, Hobby and Vocation of Aquarium keeping, The Ayurveda way of Beauty Treatment, Health Preservation, etc

The University is also promoting the International academic linkages. Prominent among these are the faculty Development Programme on 'Teaching and Learning' conducted by Daniel Goroff and Sue Lonoff of the Harvard University organised by the Academic Committee at the K.C. College in collaboration with the University of Mumbai when Dr. Manmohan Singh, MP was present to give the Inaugural address on 5th August 1996 at Mumbai. Recently, in October 1996, there has been a visit to the University of Mumbai of the Members of the Australian International Education Foundation to discuss with the various Faculty Members of the University to find the avenues for the Teachers and Students exchange programmes, promotion of opportunities for the Overseas Education and to promote certain educational programmes at this University in collaboration with Ministry of Education in Australia.

The President of the Medical Council of India, New Delhi had visited Mumbai University in September 1996 to discuss many important aspects with the Medical fraternity. The University is also proud and privileged to state that an Honorary Degree of Doctor of Laws (LL.D.) was conferred on Dr. Usha Mehta, a veteran freedom fighter and an eminent Gandhian in September 1995 when His Excellency Dr. P.C. Alexander, Governor of Maharashtra and Chancellor of the University had graced the occasion to preside over the Special Convocation.

The University is keen to progress in the Academic and Educational Activities and for the various Developmental programmes in different fields including Industry-University linkages.

Dr. (Smt.) Snehalata S. Deshmukh
Vice-Chancellor

NAAC

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ANNAMALAI UNIVERSITY

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Dr. L.B. VENKATRANGAN
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VINOBA BHAVE UNIVERSITY

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- * A beautiful and modern campus is being developed on nearly 70 acres of land.

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M. Oraon
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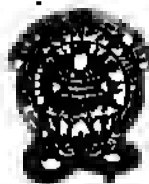
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